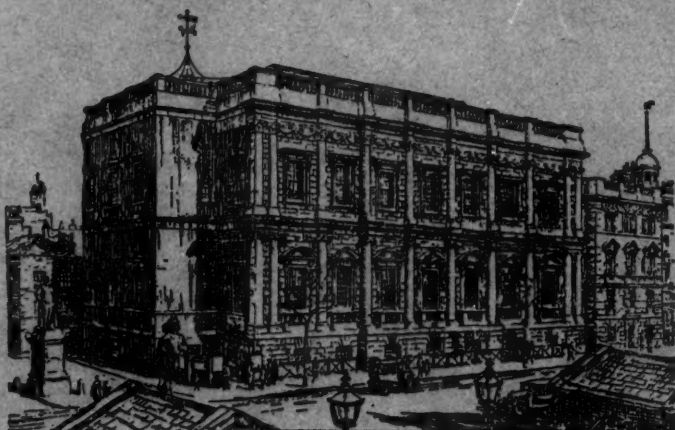


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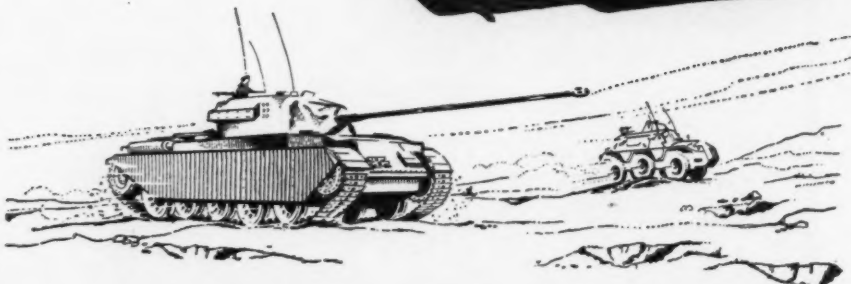
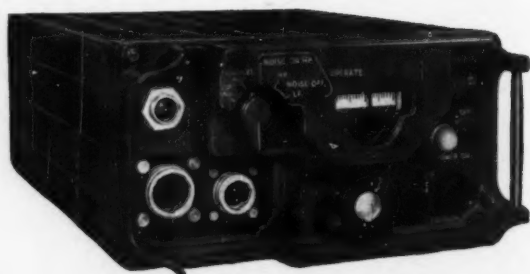
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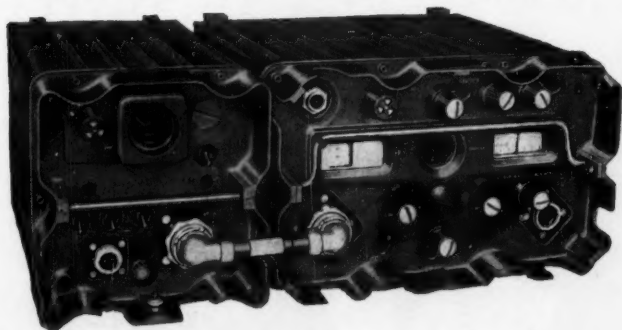
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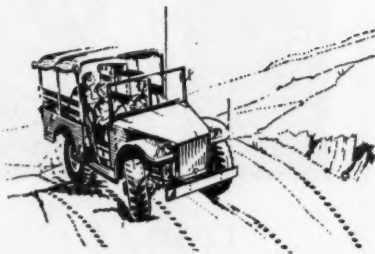
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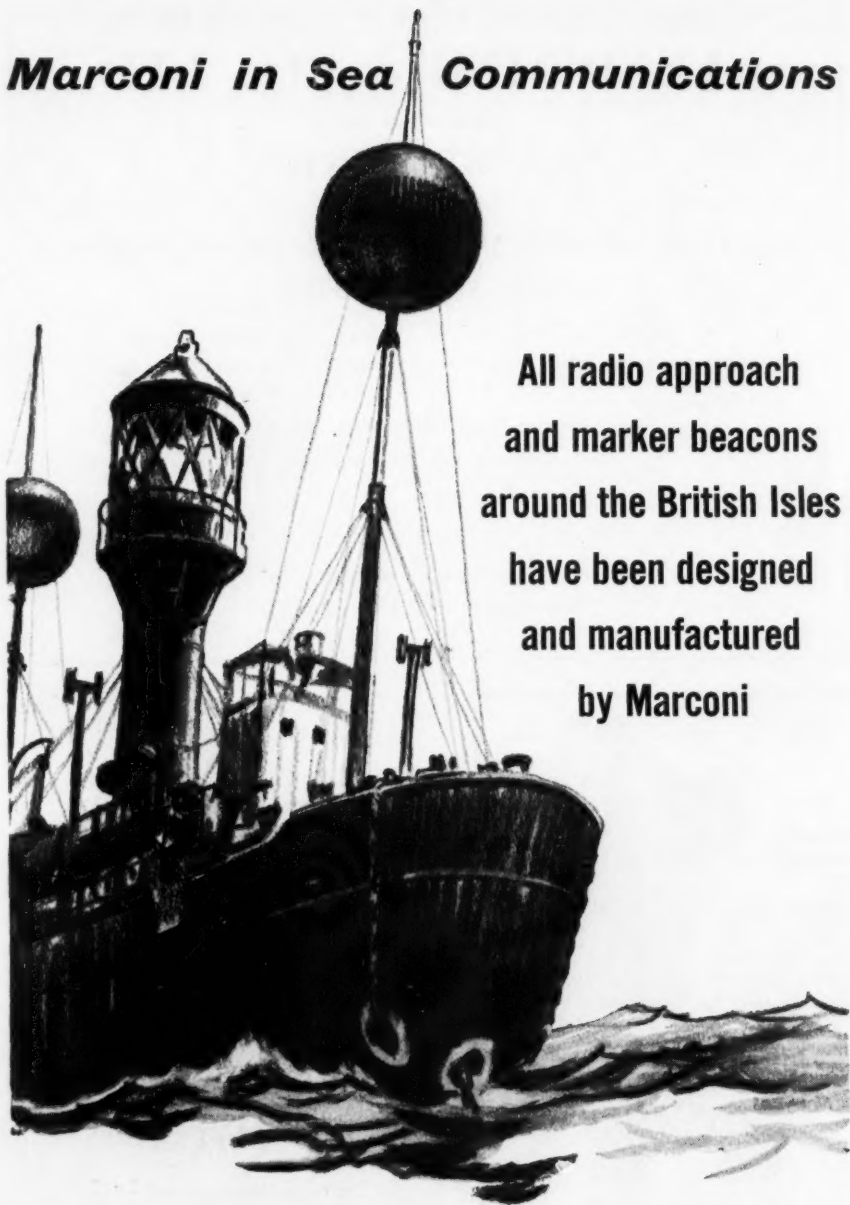
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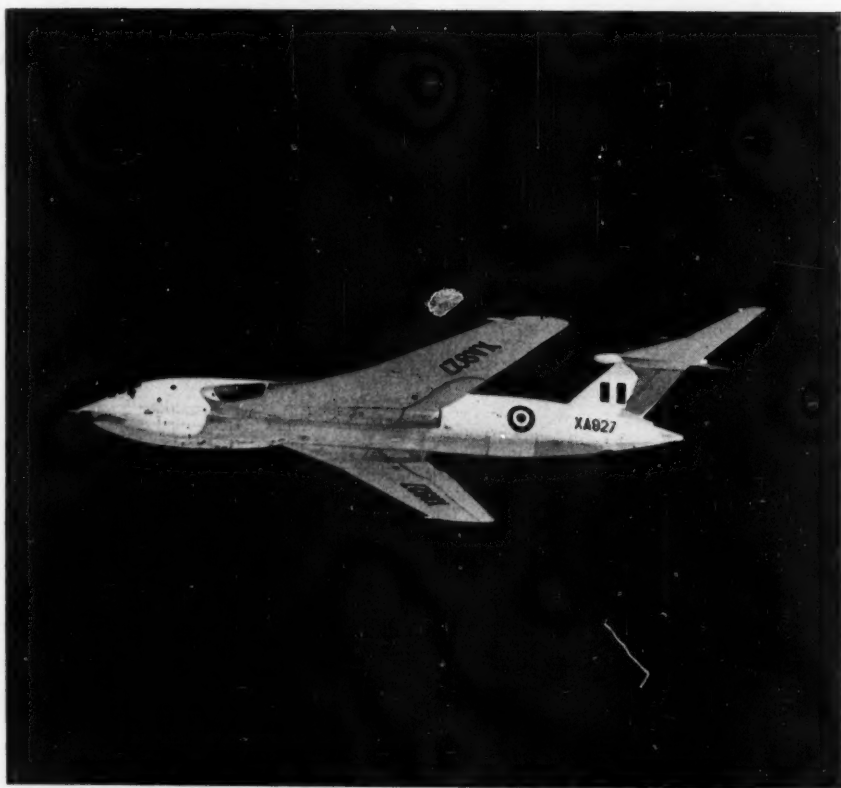
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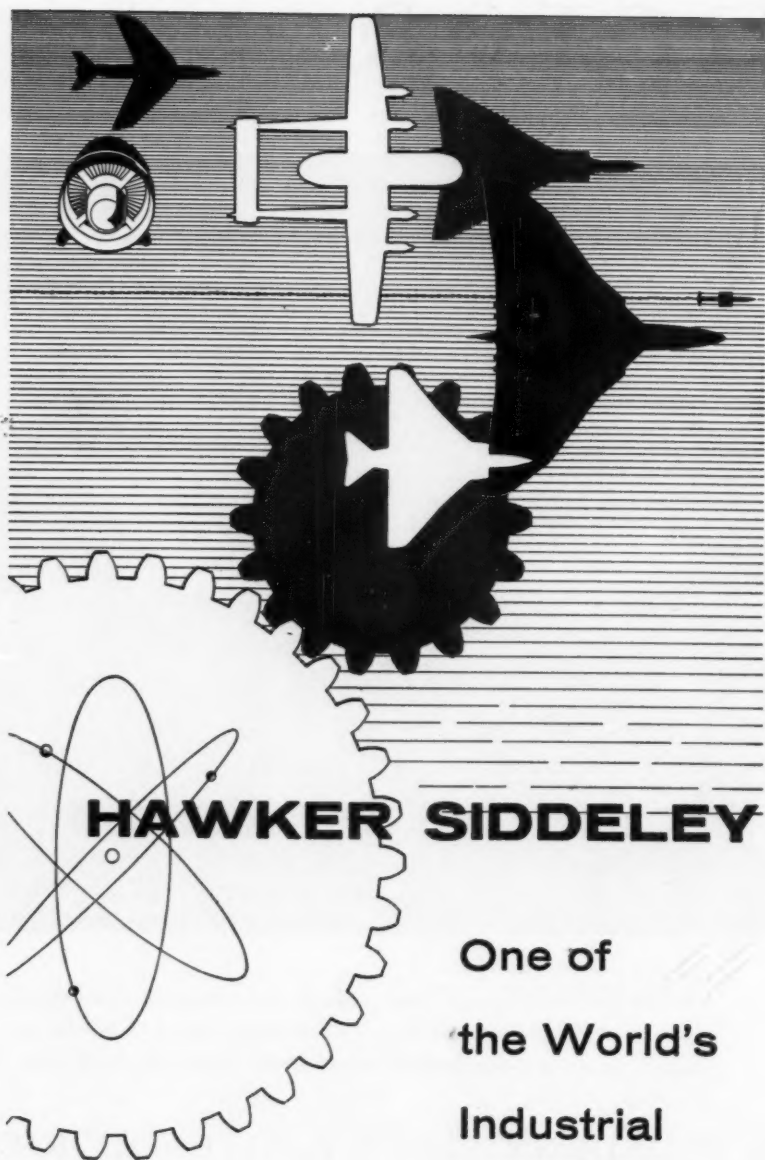
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Members can obtain on loan four volumes at a time from the best professional library in the Country. They are provided with a free copy of the JOURNAL.

There is a private entrance to the celebrated R.U.S. Museum in the former Banqueting House of old Whitehall Palace.

MEMBERSHIP

Commissioned officers on the active and retired lists of all H.M. Services, including those of the Dominions and Colonies, also midshipmen of the Royal and Dominion Navies, the R.N.R., R.N.V.R., and R.N.V.S.R. are eligible for membership without formality.

Retired officers of the Regular and Auxiliary forces, including the Home Guard, whose names no longer appear in the official lists, are eligible for membership by ballot.

Ladies whose names appear or have appeared in the official lists as serving or having served as officers in any of the three Services are eligible as above.

Naval, military, and air force cadets at the Service colleges are eligible on the recommendation of their commanding officers.

Officers' messes are not eligible for membership, but may subscribe to the JOURNAL.

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Full particulars of membership with alternative forms for bankers' orders, and for deeds of covenant enabling the Institution to recover income tax, can be obtained on application to the Secretary, Royal United Service Institution, Whitehall, S.W.1.

The JOURNAL is published in February, May, August, and November. Copies may be purchased by non-members, price 10s. od. each (10s. 6d. by post), or £2 yearly (£2 2s. od. by post). Orders should be sent to the Secretary, Royal United Service Institution, Whitehall, S.W.1.

MUSEUM

The R.U.S. Museum is open daily from 10 a.m. to 5 p.m., except on Sundays, Christmas Day, and Good Friday. Members may obtain free passes for their friends on application to the Secretary.

Members of the Services in uniform are admitted free.

SECRETARY'S NOTES

August, 1958

COUNCIL

Elected Member

Captain J. G. Young, D.S.C., V.R.D., R.N.V.R., has been elected to the vacancy caused by the retirement of Captain C. P. C. Noble, D.S.C., V.R.D., R.N.V.R.

STAFF

The Council announce with pleasure that Mr. T. J. Holland, Assistant Librarian, has been appointed a Member of the Order of the British Empire on completion of 48 years' service. At the same time, it is notified with regret that Mr. Holland's appointment has had to be terminated on the grounds of ill-health.

NEW MEMBERS

The following officers joined the Institution between 3rd April and 11th July, 1958 :—

NAVY

Lieutenant J. S. Guard, R.N.
Commander J. R. Alston, R.N.
Commander R. A. W. Pool, R.N.
Sub-Lieutenant J. W. A. Sloss, R.N.V.S.R.
Captain H. C. J. Shand, D.S.C., R.N.
Lieutenant-Commander J. W. B. Holmes, R.N.R. (Retd.).
Midshipman W. N. Gent, R.N.
Lieutenant-Commander B. H. Goulding, R.N.
Lieutenant R. H. Gaunt, R.C.N.(R).
Commander J. E. Lewis, R.N.

ARMY

Captain S. V. Lloyd, Royal Canadian Artillery.
Lieut.-Colonel P. H. Lort-Phillips, D.S.O., D.L., Grenadier Guards, R.A.R.O.
Lieutenant N. E. T. Lingard, The Welch Regiment.
Captain D. G. T. Watts, 3rd The King's Own Hussars.
Colonel J. E. H. Miller, R.C.A.M.C.
Major C. H. Hallett, M.B.E., M.C., Royal Tank Regiment.
Captain D. H. Holmes, The Prince of Wales's Own Regiment of Yorkshire.
2nd Lieutenant R. J. Bewell, The Gloucestershire Regiment.
Major R. G. Robinson, R.A.M.C.
Colonel A. F. Marchmont, D.S.O., M.C., T.D.
Major R. J. D. E. Buckland, M.B.E., Coldstream Guards.
Lieut.-Colonel M. C. S. Phipps, 7th Queen's Own Hussars, R.A.R.O.
Lieutenant G. H. Herringshaw, Royal Engineers, A.E.R.
Captain N. H. Morley, The Royal Lincolnshire Regiment.
Mr. R. D. Duthie, late R.A.S.C.
Captain R. D. Chandler, Royal Artillery.
Captain K. R. Buglass, 3rd Royal Tank Regiment.
Officer Cadet B. J. Holley, Oxford University O.T.C.
Major A. R. Carter, Royal Artillery.
Captain R. B. Sullivan-Tailyour, The Sherwood Foresters.
Major J. D. Crowe, Royal Canadian Horse Artillery.
Captain M. Haque, Pakistan Army.
Captain R. H. Thoumine, late The Queen's Royal Regiment.
Captain J. C. M. Baynes, The Cameronians.
Captain J. M. Franklin, Royal Artillery.
Captain D. Pratt, Royal Corps of Signals.
Captain J. C. Davis, 7th Gurkha Rifles.

SECRETARY'S NOTES

AIR FORCE

Pilot Officer T. H. F. Delap, R.A.F.
 Flying Officer M. S. Gautrey, R.A.F.
 Flight Lieutenant R. S. Winlow, R.A.F.
 Wing Commander M. M. Gardham, R.A.F.
 Squadron Leader R. S. F. Wright, R.A.F.
 Squadron Leader E. A. Knighton, A.F.C., R.A.F.
 Flying Officer M. J. White, R.A.F.

PRIZE MEMBERSHIP

Sub-Lieutenant D. W. Shrubbs, R.N., and Pilot Officer R. B. Gilvary, R.A.F., have been awarded five years' free membership of the Institution.

LIAISON OFFICERS

The following alteration to the list of Liaison Officers, as published in February, has taken place :—

| <i>Command or Establishment</i> | <i>Name</i> |
|---------------------------------|-------------------------------------|
| Flag Officer, Scotland | Commander D. H. Swift, D.S.C., R.N. |

EARDLEY-WILMOT MEDAL COMPETITION

The competition for the medal instituted by the late Rear-Admiral Sir Sydney M. Eardley-Wilmot will take place this year.

The medal will be awarded for the best essay contributed by a member of the Institution on :—

Current scientific developments appear likely to result in considerable structural changes in the armed forces and possibly between them and civilian authorities. Describe the likely outcome of this trend and discuss the desirable steps in its development.

Essays must be typed in triplicate, and each copy must be clearly marked "Eardley-Wilmot Competition" on the outside. Care should be taken to avoid confidential matter. When a reference is made to any work, the title of such work must be quoted.

Essays must be strictly anonymous, and each must have a motto, which must be written on the outside of each copy. They must be accompanied by a sealed envelope with the motto written on the outside, and the competitor's name inside.

All essays must be sent by registered post, addressed to the Secretary, Royal United Service Institution, Whitehall, London, S.W.1, and must reach the Institution not later than 15th November, 1958.

A silver-gilt medal and sixteen guineas will be awarded for the best essay. (Repeat of notice published in the February JOURNAL.)

MUSEUM

ADDITION

A Transparency Viewer Unit (3736). Lent by the Air Ministry.

READING ROOM

We acknowledge with many thanks a gift from the Colonel, The Lancashire Fusiliers (Brigadier P. G. Bamford, D.S.O., O.B.E.), of a reading cover for issues of the Regimental Journal, *The Gallipoli Gazette*. The cover is of deep red morocco with gilt crest and lettering.

JOURNAL

Offers of suitable contributions to the JOURNAL are invited. Confidential matter cannot be used, but there is ample scope for professional articles which contain useful lessons of recent wars ; also contributions of a general Service character, such as strategic principles, command and leadership, morale, staff work, and naval, military, and air force history, customs, and traditions.

The Editor is authorized to receive articles from serving officers, and, if found suitable, to seek permission for their publication from the appropriate Service Department.

Army officers are reminded that such articles must be accompanied by the written approval of the author's commanding officer.

LECTURES

The programme of lectures for the first half of the 1958-59 session is published with this number of the JOURNAL.

There is an extension of the loudspeaker system from the Lecture Theatre to the Reading Room for use as required. Members and their guests will on arrival be accommodated in the theatre until it is full, when the excess number will be directed to the Reading Room.

Tickets are not issued for any lectures and seats cannot be reserved, other than for the Council and official guests.

It has been decided that a trial should be given to lectures being held at 1.30 p.m., if it is convenient to the lecturer. A further experiment will be the provision of a sandwich lunch and coffee, on payment, for those members who desire it. In order to limit the cost, the service will be organized by the Institution staff, and members are asked to bear this and the experimental nature of the project in mind.

A start will be made at the lecture by Field-Marshal Montgomery on Friday, 24th October, when it will be appreciated that the initial test will be exacting. The decision between obtaining a good seat in the Lecture Theatre and having lunch on the third floor must be left to individual members.

An important factor is advance notification from members, and this is urgently requested as it will not be possible to carry a surplus for chance requirements. The venture is solely in the interests of members but, for the information of those who prefer a snack elsewhere, there are some good sandwich-bars opposite the Admiralty in Whitehall.

CHRISTMAS CARDS

Orders for Christmas cards, specially designed for members of the Institution, can now be placed.

Card A has the crest of the Institution on the outside, and inside a reproduction of a black and white sketch of Vanbrugh House in Whitehall Yard, the first home of the Institution. The price, including envelopes, is 12s. a dozen.

Card B is a reproduction in colour of "The Loyal Associated and Volunteer Corps of the City of Westminster, 1799"; inside is the crest of the Institution. The price, including envelopes, is 20s. a dozen.

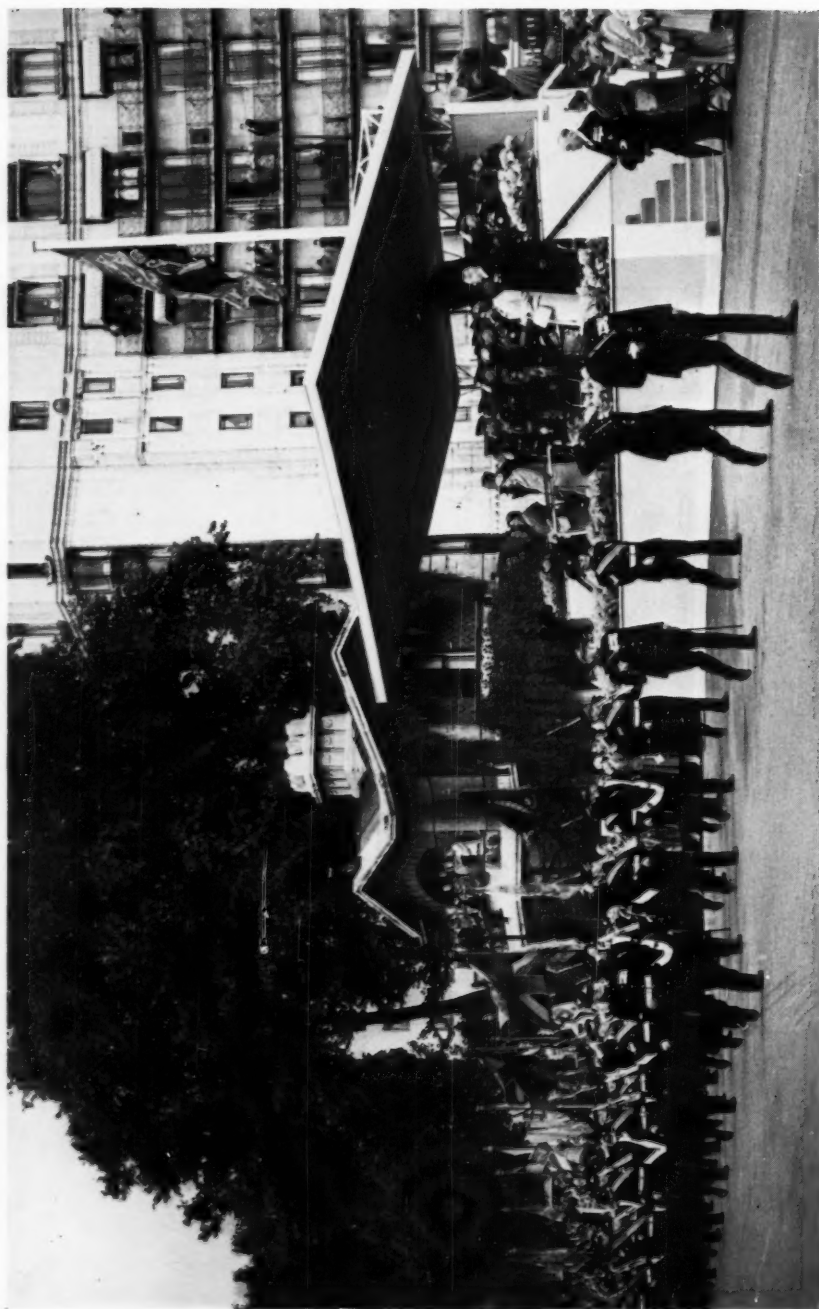
Postage and packing is 1s. for the first dozen and 6d. for each additional dozen by ordinary mail.

Members are requested to ensure that the correct remittance, including postage, is sent with their orders. It is regretted that *orders cannot be executed until payment is made.*

Sample cards can only be sent against a remittance of 1s. 2d. for the A type and 1s. 10d. for the B.

CORRECTION

In the report of the result of the Trench Gascoigne Prize Essay Competition, 1957, on page 320 of the May JOURNAL, for Mr. E. A. Abbotts, O.B.E., T.D., B.A., please read Mr. E. B. Abbotts, O.B.E., T.D., B.A.



[By courtesy of the Sunday Times.]

HER MAJESTY THE QUEEN TAKING THE SALUTE AS THE TERRITORIAL ARMY
MARCHES PAST IN HYDE PARK

THE JOURNAL

of the

Royal United Service Institution

Vol. CIII.

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No. 611

EDITOR'S NOTES

GOLDEN JUBILEE OF THE TERRITORIAL ARMY, 1908-1958

IT would not be fitting for this JOURNAL to be published at this juncture without a reference to the greatest citizen army in the world, the British Territorial Army. Lord Haldane, when Secretary of State for War, conceived a great idea, the wisdom of which has been proved by 50 years of actual practice and experience in peace and war. This idea was formulated in a Bill which passed through Parliament and received the Royal Assent as The Territorial and Reserve Forces Act, 1907. In each county in the United Kingdom a body was formed, called the Territorial Association, under the Presidency of the Lord Lieutenant. The duty of these Associations was to merge the Yeomanry and Volunteer Forces, some of which had been in existence for hundreds of years, into a much more important and better organized force, named the Territorial Force, now known as the Territorial Army.

The duty of the Associations was to recruit the units and to administer them in peace, the military Commands being responsible for their training. This reorganization was a great success and the Force was in full swing when the war broke out in 1914. All units of this great Army were mobilized and fought in theatres of war all over the world. When the War ended the Territorial Army returned to their peace-time role and, after a great deal of change and regrouping, were again available in large numbers to be mobilized in 1939, once more becoming an integral part of the Army. Meanwhile they had taken over sole responsibility for the anti-aircraft and coast defence of the United Kingdom. History repeated itself, and their glorious record resounded throughout the battlefields of the world. In the meantime the Associations raised and administered another great citizen army—the Home Guard—and re-formed the Army Cadet Force. In 1947 the Territorial Army was reconstituted on a volunteer basis, augmented later by a large number of National Service men. Today the National Service men have ceased to train with the units in peace and only the volunteer is now required. This means that the men and women now serving are once again true volunteers, carrying on the great tradition of their forbears as soldiers as well as citizens.

We must never allow it to be forgotten that, in two wars, countless Territorials made the supreme sacrifice. That they were honoured with over a hundred awards of the Victoria Cross is only one measure out of many of their gallantry and success as soldiers. We must remember, too, that it is those who serve in peace who form the hard core for expansion if the need arises. Thus it is the duty of every citizen, whether he or she be employer, wife, parent, or friend, to see that there are sufficient men and women forthcoming to fill the ranks.

May we salute this great Army and commend all ranks, past and present, as a great body of loyalists to their Sovereign and their country. And in doing so, let us not forget Field-Marshal Sir William Slim's phrase that a Territorial is "twice a citizen."

* * * *

As these notes are being written we await the Government's announcement on the new form that the high command structure of our forces is to take. We have no wish to attempt comment before the fact, but it is obvious that for some time now there has been an uneasy feeling that the present system is no longer efficiently geared to the increasing pace of the march of events or to the technological developments of the post-war years.

Some two years ago, in a lecture in this Institution, General Sir Ian Jacob discussed this matter and introduced some thoughts on the way in which the higher command structure might be developed for possible future conflict. He was talking under the shadow of the cold war, which gave some urgency to his remarks.

In the intervening years this shadow has grown no less. Nor, perhaps, has the urgency of the problem which Sir Ian Jacob posed. Indeed, two major events, and a large number of minor ones, have merely served to accentuate the need to take serious stock of our existing machinery for the direction of war.

The two major events were contemporaneous. The repression by Russia of the uprising in Hungary brought into sharp focus the fact that the change of leaders there involved no change of policy. The cold war is still with us and is being waged as implacably as ever. It is, of course, true that cold war is political in its nature, but behind policy must lie force in reserve if it is to succeed. In a country such as Great Britain, where force must be limited in size through economic necessity, any lack of numbers must be counterbalanced by an increased efficiency and by a swiftness in attack that will make up in speed for what is lost in power. There is no other way, apart from sheltering half-heartedly under the umbrella of powerful alliances.

The second major event was the Suez operation. Viewed now in some small perspective of time, it is difficult to deny that the military machine creaked badly. Was the plan that was executed the plan that was conceived by the Service Chiefs concerned? If it was, the timing of the air attack and subsequent sea-borne assault were extraordinarily badly co-ordinated. If it was not the conceived Service plan, was there high level emasculation of the plan for political reasons? This is certainly the impression that one gets and it implies bad and unco-ordinated direction at the highest level. It is nothing new for military plans to have to take full account of political requirements, but if the direction is right this should not and need not lead to a plan which was brought to a grinding halt just as it was beginning to develop. Was it right or necessary to launch troops in offensive operations without a declaration of war? In fact why was the joint Service and political direction of this operation so inept? Was there no organization for joint Service and political direction or was the organization that existed not used? How can we do better next time? Is it a matter of organization or personalities? Of the rights or wrongs of the Suez operation in the political sphere this JOURNAL is not concerned, but these are military questions which reflect upon the high command structure as it exists today.

The correct balance is desperately hard to strike, yet there must remain a lingering doubt as to whether we have yet come far enough in the development of

the high command machinery. The transition from the Committee of Imperial Defence to the Chiefs of Staff Committee was a natural and obvious step and, in spite of a good many stresses and strains, it worked well enough in the last war. Since then the system has been further modified by giving the Minister of Defence greater power of decision and by introducing a permanent Chairman of the Chiefs of Staff Committee. But, in the light of Suez, this seems an unwieldy structure, and the time would seem to be overripe for a new step forward towards a still greater efficiency in this vital field.

By the time this JOURNAL is distributed to readers, the new decisions will be known. We hope to arrange for some discussion on the changes in our pages, for the matter is of prime importance to us all. It is no exaggeration to say that it is entirely on the correct solution of this problem that the success or failure of our arms in any future conflict inevitably hangs.

* * * *

We publish in this issue Sir John Glubb's lecture which was delivered in this Institution last January. It deserves, we feel, wide study and thought, for his is the voice of experience on this particular subject. It is so fundamental a truth that only knowledge can be the real basis of efficiency, that Sir John's plea for a detailed and accurate study of the nations and the people of this troubled area needs no emphasis. We are not likely to prosper far without it.

The remarks above refer equally to the article by Commander Barley and Lieut.-Commander Waters, also in this issue. They write with knowledge, and thus authority, on the maritime problem which would face Britain in war, nuclear or conventional. In the final analysis, what they deal with in their article is the actual survival of Britain in war, in any war of whatever nature. The whole of recorded British history is there to buttress their case, for this is the one essential battle that must be won if victory is ever to crown our martial efforts. It is just not true to say, as has so often been said, that the British in war lose every battle but the last. That the last battle is so frequently won is invariably due to the fact that, before it, the battle at sea has already been won.

* * * *

As readers will be aware from the lecture programme sent out with this JOURNAL, Field-Marshal Lord Montgomery is to give an address to the Institution on 24th October. It will, as usual, be printed in the November JOURNAL. We have had sufficient experience of Lord Montgomery's lectures in the past to be able to say, with confidence, that it is certain to be stimulating and challenging. As yet, of course, nothing beyond the title is known, but that in itself promises an exciting talk. It may be necessary to delay the publication date of the November issue by a few days in order to include the Field-Marshal's lecture, but we feel sure that there will be no cavilling at this. The importance of the occasion fully warrants a week or even ten days of delay.

Also for the November issue we have asked Vice-Admiral Hughes Hallett to comment on the new command structure as set out in the White Paper, and he may possibly be joined by others on the same subject. Mr. Marcus, who wrote an excellent article for the JOURNAL last November on Sir Cloudesly Shovell's last voyage, contributes an amusing study of the naval rearmament scare of 1909. The Trench Gascoigne First Prize Essay will also appear in November.

A FURTHER REVIEW OF THE MIDDLE EAST

By LIEUT.-GENERAL SIR JOHN GLUBB, K.C.B., C.M.G., D.S.O., O.B.E., M.C.

On Wednesday, 8th January, 1958, at 3 p.m.

AIR CHIEF MARSHAL SIR CLAUDE B. R. PELLY, K.C.B., C.B.E., M.C., in the Chair

THE CHAIRMAN : I must first explain that I am taking the Chair this afternoon in place of Admiral Sir Guy Russell, who is unfortunately ill in hospital. I am glad to say that he has made a quick recovery and should be out in two days.

I would add that I am a very willing substitute. When I was in the Middle East I was proud to be associated with General Sir John Glubb in various activities, and I for one look forward very much to hearing what he has to say this afternoon. The size of the audience indicates, I think, the extreme interest which we have in the subject about which he is now going to talk.

LECTURE

BEFORE speaking of the Middle East I should like to emphasize three aspects of this area which seem to me to hold the key to its importance. By far the most important aspect of the Middle East is that it is the corridor which connects western Europe with the Indian Ocean. Obviously these two vast areas produce entirely different products, and all through history they have desired to exchange them. This is not something which we have invented and which is peculiar to us ; it certainly dates from at least 2,500 years ago. It was just as important in the days of the Roman Empire as in the days of the British Empire. Curiously enough, in those early times the world was also divided between East and West, the West being represented by Rome and the East by the empire of Persia. East and West in those days, as now, spent years or centuries intriguing or fighting against each other, each desiring to possess this corridor.

Another aspect of this corridor is that throughout this period of two or three thousand years not only have the basin of the Indian Ocean and western Europe had a vital interest in this passageway, but the peoples who live in it have owed most of their livelihood and importance to the fact that they live in this passage. To give one small example from history. No doubt some of you know that in what is now Syria there is, in the middle of the desert, a city called Palmyra which has never produced anything, either then or now. But at one stage a large part of this east-west trade used to go up the Persian Gulf and the Euphrates and across to Palmyra. Being on the transit route for a part of this trade, this desert city became so rich that it conquered Egypt, defeated Persia, and challenged Rome. It took Rome two years of war to bring Palmyra back into subjection.

Secondly, we have the strategic aspect, which is very largely the same ; being a corridor from the Mediterranean to the Indian Ocean. It is also the centre of gravity, or the hub, of three continents. If we draw a circle of 3,000 miles radius with its centre at the junction of Jordan, Syria, and Iraq, it will take in the whole of Europe (including Spain, Britain, Scandinavia, and also, of course, Moscow), Calcutta, and Africa down to Southern Rhodesia. In fact, if we cut out China, that spot is almost the exact centre of Europe, Asia, and Africa together.

A third point, which I think is very rarely appreciated in this country, is that this area, being as it is at the junction point of three continents, has a population recruited from all three directions. Most people in this country seem to have the idea that the Middle East is inhabited by a single, homogeneous race called the Arabs.

Few things could be further from the truth. The majority of the people of Syria and the Lebanon are probably of European origin, closely related to the Greeks. Originally the inhabitants of Iraq were believed to have come from India, and since then and for six or seven centuries Iraq formed part of Persia. In the south, in the Aden area, there is a strong admixture from Africa.

You have only to see these people to realize the truth of this. If you land in the Lebanon you find that the people are indistinguishable from Europeans, whereas if you land in the south you find them a dark coffee colour. The only way to describe the people who live in these areas is to say that they are Arabic-speaking. The illusion that they are all exactly the same and of the same race has actually brought considerable discredit on them, because people say, "What a wretched lot the Arabs are! Why don't they agree with each other?" In fact, however, the population consists of several entirely different peoples.

Another fact which it is important for us to realize today is this. We are all apt to think that the importance of this corridor is peculiar to ourselves. It is essential for us to realize that all the countries round the basin of the Indian Ocean and all the countries of western Europe have a share in this trade. The blockage of this passageway affects everybody. It affects Britain more than other countries because Britain makes a greater proportion of her livelihood than do other countries out of overseas trade.

For two or three centuries we have succeeded in always having a right of way through this passage. For most of that time we did so by a steady policy of supporting Turkey, but at the end of the last century and the beginning of this a new era began. It was started by two factors. One was the desire of Turkey and also of Persia to modernize themselves, the other was the progressive industrialization of other European countries. Consequently, whereas Britain for a couple of centuries had had things more or less her own way in these parts, except for Napoleon's landing, there grew up from 1890 onwards an increasing competition from other European nations to share in the modernization of Turkey and Persia.

This is an interesting subject, because eventually, early in this century, the nations concerned decided to split the difference. In 1906 or 1907 Britain and Russia agreed to split Persia in half, and in 1909 (I think it was) an agreement was reached with Germany, who was building railways in Turkey, not to go south of Baghdad. I say to 'split' Persia, but we have to realize exactly what this meant. It was because these countries desired to modernize themselves that they wished to give contracts, and these contracts led to competition between the different European nations. The mutual agreement between them to recognize various spheres of influence was, and still is, bitterly denounced as the most disgraceful economic imperialism, but it is interesting to compare the position then with the position today.

No one would ever venture today to suggest making an agreement between two countries on the spheres in which they should exercise their economic enterprise, but it is not possible to get rid of the competition. Whereas formerly the nations agreed that all contracts in one area should go to one country and in another area to another, today everyone bids for all of them. The result is that the competition takes an increasingly political form, and an agitation is started throughout a whole country to bring it into one camp or the other. It is extraordinarily difficult, living as we do in a certain period, to divest ourselves of the atmosphere in which we live and realize what people in other periods were trying to do.

Shortly after the end of the last war, I remember walking across St. James's Park with a man in the Foreign Office who said that the Russians were being very difficult and we were having a great deal of bother all over the place. I said, "Why can't we agree to split the world?" He replied, "Good God, man, haven't you any conscience? What a dreadful idea!" When, however, one has lived in one of these small countries which is constantly torn by the rivalries of these great Powers, with each pulling in different directions, making everything unstable and engineering revolutions against each other, one cannot help feeling that the old days had some advantages. The action taken may have been a little cavalier towards the Asiatic countries, but at least it saved them from the constant engineering of revolutions, which is what is going on today.

I think that the two agreements which I have mentioned are of some interest to us, because what Britain asked was that other nations should not work south of Baghdad, in Iraq, or in the southern half of Persia. And that, of course, emphasizes what I said at the beginning; that the whole significance of this area is that it is a passageway to the East.

Talking of tearing these little countries in half between us, one of the most extraordinary developments today seems to be the attitude of the United States of America in boycotting any nation which has anything to do with Russia. When you live in these little countries you come to realize that they feel that to be completely in the bag of one great Power is slightly *infra dig.*, and that a country is really not independent if it has only one European ally. They want, therefore, to feel themselves free to negotiate with a great many different nations. Yet as soon as one of them makes any advances towards Russia it is 'sent to Coventry,' and even the British Press refers to the people there as Communists.

The example which comes first to our minds is that of Syria. I was very impressed, three or four months ago, to see in the Press here a statement attributed to no less a person than Mr. Khrushchev himself, who is reported as saying, "There are not any Communists in Syria; the only thing about the Syrians is that they do not want to be bossed by the western Powers." That was at a time when our own Press here constantly referred to Syria as 'going Communist.' It seemed to me alarming that Khrushchev had the gist of the exact situation at his finger-tips while we, who are supposed to have had so much experience in the area, had the whole picture wrong.

If you ask people what is the cause of the trouble, they will tell you that Arab nationalism is creating all the difficulties. I should like, therefore, to say a few words about Arab nationalism from its inception. In 1914, practically speaking, there was none. The last despotic Turkish sultan, who was dethroned in 1908, had been a great advocate of imperial solidarity. He had particularly assisted the Arabs and had prevented the Turks from assuming the airs of a ruling race. It is true that when he was succeeded by the 'Party of Union and Progress' a certain amount of Turkish racial feeling became apparent, but it was only just beginning and the political aspect of Arab nationalism in 1914 was limited to two secret societies in Beirut and Damascus, which were so secret that hardly anybody knew anything about them, even in Beirut and Damascus. It is true also that the Turks never succeeded in bringing the Arabs into line. That was not due in the main, however, to the modern feeling of nationalism; it was due rather to the sturdy feeling of independence (if you like to put it that way) or to the turbulence of the Arab tribes. The Arab tribes resented every form of government and, as the form which occasionally harassed them was a Turkish form, they were against it.

The division still exists between the political nationalism, which is derived and copied from western ideas, and the tribal disorder or tribal desire for independence, which has really no racial or no modern democratic idea behind it. If, for example, we look at the disturbances which took place in Oman last autumn we find an excellent example, because there we have the Egyptians, inspired by modern ideas of nationalism, stirring up the tribes to revolt against their theoretical ruler, a pastime in which the tribes have always indulged for hundreds or even thousands of years. Every now and then these two attributes, tribal turbulence and European ideas of nationalism, coincide; but if they are successful they always fall apart, because the nationalist government is just as unpopular with the tribe as the foreign government was. When they can be made to coincide, however, they occasionally produce a result.

During the first World War the Arab rising was brought about by British negotiation with the Sherif of Mecca. The British Government at that time was unaware of the two secret societies in Damascus and Beirut and imagined, I presume, that it was dealing only with the usual Arab opposition to whatever government there is. But, as doubtless you all know, an agreement was concluded between the British Government and the Sherif according to which, at the end of the war, a great Arab Government would be created, covering the greater part of the Arabian peninsula.

Immediately after making that agreement the British Government made an agreement with the French. It is an agreement which has been frequently denounced ever since, because it divided what we had promised the Arabs into two parts. It did not state that it was to be divided politically, and I do not think that that was intended. It is only when we remember the economic division of Persia into spheres of exploitation that we can get some idea of what the British Government thought that it was doing. The wording of both these agreements was so vague that there has been argument about them ever since. There is no doubt that this vagueness has been one of the major factors in building up Arab resentment from that day to this.

But, curiously enough, although those agreements can be interpreted in so many different ways, the Allies offered other pledges from which it seems to me that there is no possibility of escape, though they never seem to have been used as a means of reproach. They were offered both when General Allenby entered Jerusalem at the time of the armistice on 7th November, 1918, and when President Wilson produced his famous 'Fourteen Points,' to which all the Allies agreed. We repeated again and again that our sole object in the countries which had formed part of the Turkish Empire was to allow those countries to choose their own form of government and that we had no intention of interfering. Whatever may have been said in the letters between McMahon and Sherif Husain, or in other exchanges with the Arabs, nothing can be plainer than the statements made by Allenby, and on several successive occasions by the British Government itself.

In the summer of 1920 the French occupied the whole of Syria with their Army. There can be no doubt whatever that the inhabitants of Syria did not want them, but they were not allowed to choose. They had to have them for the following 25 years. In just the same manner, the people of Palestine were never allowed to choose the form of government they preferred, and eventually more than half Palestine became a Jewish state, although in 1918 only 7 per cent. of the population of Palestine were Jews, 93 per cent. being Arabic-speaking people.

Thirdly—and this, I think, is one of the causes of our trouble with Egypt—at that time we were in occupation of Egypt. The Egyptians for more than 100 years—I think it can be said that the renaissance of Egypt was started by Mohammed Ali—have considered themselves to be intellectually vastly superior to the peoples of Arabia, and consequently they were considerably aggravated when Britain, towards the end of the first World War, made these promises to allow all the Arabs to choose their own form of government. The Egyptians were inclined to say, "After all, these wretched Arabs are mostly Bedouins riding about on camels; if they can choose their own form of government, what about us?"

Looking back at those pledges which were given in 1918, I think that we cannot get away from the fact that in the case of Syria, Palestine, and Egypt, we did not live up to the general promises which we made then and afterwards. It is interesting to notice that those three countries, Syria, Palestine, and Egypt, which did not have a 100 per cent. fair deal, are precisely the ones which are hostile now. Whatever we may think of them, we cannot, it seems to me, get away from that fact. It is no use flattering ourselves with the idea that these people are horrible cads and that we have always done our best. It is striking that Transjordan, Iraq, and the other countries which had a fair deal are still on our side, whereas the peoples who had a bad deal in 1920 are those who are giving us trouble in 1958.

I suppose that Arab nationalism would have arisen in any case. Nationalism is a world-wide fashion, a phase which we are going through. Undoubtedly, however, we brought it on, encouraged it, and hotted it up during the first World War, and then having tremendously added to it, we exasperated it by not giving it what we said we would. A point to notice is that nationalism, like most fanaticisms, is something which thrives on opposition. If it gets all it wants without much trouble it falls a part. To get it really worked up requires just that amount of opposition which we supplied.

Perhaps one of the best ways of visualizing nationalism in these countries is by comparing it with the human being. Probably most children believe that paradise consists in being grown up. They think that once they have grown up and got away from school they can do just what they like; everything is too wonderful for words, and they count every day and term and year until they have finished with school and have grown up. As soon as they leave school they are extremely anxious that everybody should know that they are now independent, and if father or mother tries to give orders any more or to regulate their lives they are apt to resent it. After a few years, of course, this complex wears off; so much else happens, there are so many difficulties and so many other trains of thought that this resentment of parental authority disappears. There is, however, that period of resentment which most adolescents go through.

All these little countries had been part of the Turkish Empire for four or five centuries. We then told them that they were all to be independent but, instead of fulfilling this vision which we had conjured up, we controlled them ourselves for a further 25 years. Today, and since the second World War, they are really on their own but they are still in the stage of being frightfully touchy about it. They are still in the stage of the boy or girl who, having just left school, is on the lookout for father or mother interfering and saying, "You must be home by six o'clock," or something of that kind. They imagine that everything we say is either a studied insult or at least an attempt to reimpose some form of control. We have, I think, to realize that they are in this state and to handle them accordingly.

I said that in the case of human beings this craze passes off after a few years, and being grown up and independent turns out not to be paradise after all. The same thing happens to a little country. If it is left on its own for a time it runs into all sorts of snags and before long wants to be friends again. If I may carry my simile a little further, I would compare these countries to the adolescent who, having left the parental roof, gets to know a party of gangsters or teddy-boys. A remarkable fact about adolescents is that, although they keep an eye on their parents and do not intend to be influenced by them, they are apt to be completely influenced by some other adults. They do not resent that because these are not the people who have ordered them about hitherto.

I think that we can apply that also to these little countries. Many people are surprised that such intense resentment seems to be shown against Britain, France, and America, but none at all against Russia. There is a parallel there to some extent. They have their eye on the people who bossed them before, but they do not suspect some gangster, who comes round the corner and whom they have never seen previously, of wanting to dominate them. He is welcomed and thought to be a wonderful chap, and he tells them that he really knows life.

If only these peoples were left to themselves they would get over that also. In Europe such nations did not have a chance; the people of the satellite countries, so far as we can tell, are disillusioned, but, being territorially connected with Russia, they have 'had it.' The Russians maintain themselves by force. The problem to which we do not yet know the answer is whether or not the Communists will be able to maintain themselves by force in such countries as Syria and Egypt. Having got in, as I think we may say, by deception, will they be able to clamp down and stay, or will the pendulum be able to swing back, as it undoubtedly would, given the opportunity?

All the backward countries are really in a terrible predicament. They passionately want to be up to date, but they cannot bring themselves up to date without assistance. Before the first World War, the great European nations, as I have said, agreed amongst themselves, to some extent at least, about who would provide this assistance and in what area. Now they do not agree any more, and so the miserable little country which wants assistance finds itself in the bag on one side or the other. In a sense that is the same sort of trouble which occurred 50 or 60 years ago, but in another sense everything is different; and I want in conclusion to describe to you why everything is so different.

Since the second World War the countries of Asia have undergone a complete revolution. This revolution has been due to three or four causes. Some of them we ourselves originated. All these countries have always, so far as we know, been autocratically governed. In the last few years there has been a tremendous extension of education—education of a sort. Every country in the Middle East has in the last few years adopted democratic institutions which are almost exactly modelled on our own. Admittedly those institutions do not work there exactly as they work here; nevertheless they do effect a revolution. There is the combination of the extension of very often inferior education with the establishment of democratic institutions.

In the course of ten years, therefore, there has been a complete revolution. The governments of all the Arabic-speaking countries in this area, and particularly of the northern and more advanced ones, are afraid. They are all afraid of their own public. After being autocratic for thousands of years they now have extremely little authority. In order to realize the instability which to a large extent we have produced, whether

well-meaningly or otherwise, it must be borne in mind that, taking men and women together, 65-70 per cent. of the people in the most advanced of these countries cannot read or write at all. Perhaps another 15-20 per cent. can read and write, but only to a very limited extent. Hardly anybody in these countries can read a book. It is difficult for us to visualize what this country would be like if none of us had ever read a book. They read snippets in the newspapers, but not a book. These people have no background knowledge, but at the same time they have suddenly awakened and are sitting up and taking notice.

If they were left alone they would undoubtedly sort themselves out in two or three generations, but, as I have been trying to say, they are not left alone for a minute. This process is not limited to the Middle East, but is going on all over Asia and is beginning to go on all over Africa; and what is important is that the Russians have a complete technique ready for cashing in when people are at this stage and western control is withdrawn. This technique is always applied in exactly the same way, and it is irresistible to people who are in this primary stage of interest and power in public affairs.

You may say, "That is all very well, but what are we to do about it?" Many people say to me, "Yes, we know what you are talking about; you want more propaganda." I do not think that I should limit it to that horrible word, which has become rather unsavoury and always suggests telling lies, but I should like to make two suggestions, one short-term and one long-term.

On a short-term basis, one of the things which has struck me most since I returned to this country is the immense amount of information about the whole world which we get every morning in our newspapers. Each morning we are told what has been happening all over the world the previous day. I also have the impression, however, that to nine people out of ten, or even to 99 out of 100, most of this news does not mean a thing. Certainly most of it does not mean anything to me because I do not know enough about the country in question to know what these developments signify. We have not enough background. When I am told that the rebels in Venezuela are marching on the capital, it does not mean anything to me; I do not know what they are troubled about, what is wrong with the government which they have, or what kind of government they want to have. It also seems to me that, living here, it is extremely difficult to find out what the whole picture is.

Now, if that applies to us it applies vastly more to people who live in the Middle East. They have wireless sets, and quite a proportion of them read at any rate the headlines in the newspapers. But they have no general picture in their minds; they have not the faintest idea of what Britain, Russia, America, or anybody else is trying to do. If you have no background picture, you cannot sort out the information that you receive. If only these people knew what we were trying to do they would be able to discount three-quarters of what they are told.

On a short-term basis, therefore, it seems to me that the daily repartee form of propaganda is of only limited value. If the Russians, or Nasser, or anyone else says something, you may refute it but you have not got very much further when you have done that. I think that very few people, even in this country, know what we are trying to do, but if we try to piece it together we find that it does make a picture. A good deal of work is necessary, however, to discover what runs through the whole of our policy.

It seems to me, therefore, that in order to discount the terrible things which the peoples of the Middle East are told about us, it is not enough to contradict from day

to day the libels that are published by the other side. We want someone to produce a simple and lucid picture which is absolutely true. I feel that that would win half the battle of this day-to-day conflict of propaganda. I know that in Jordan nobody ever understood what the British wanted. The people there were daily being told, "The British want to take your money; they want to dominate; they want to rule; they want to oppress; they want to set one Moslem against another." But in aid of what? Nobody ever told them. It would have helped if they could have been given a little picture of the situation, such as it seems to me is supplied by the whole succession of those agreements to which I referred earlier, which would show that Britain wanted to get control of the communications. Why? Obviously because this is the passageway through which everything goes to, and comes from, Asia. No single Arab that I ever met had ever heard of that. They all knew the latest thing that Colonel Nasser had said and the latest thing that Mr. Khrushchev or Mr. Eisenhower had said, and they had it by heart; but what it was all in aid of they did not know.

That is for the short term. For the long term it seems to me that the question is a bigger one. Dealing specifically with Asia, we were perhaps fortunate for 200 years in that we had these countries almost entirely to ourselves. Admittedly at the beginning the Dutch, and later the French, made a bid, but in most cases their competition was eliminated in a few years of war. Not only was there not, in Asia, any competition from other nations, but also we were overwhelmingly strong. Perhaps it was that overwhelming strength which made us guard voluntarily and alone these trade routes, and which gave us, and perhaps other people, the idea that trade routes were a British racket.

Today the world has changed. It has become much too small. All sorts of other people are in the field and the old methods cannot be used any more. Perhaps I might return again to my simile of the adolescent. When your little boy is only four or five years old and behaves badly at table, a couple of smacks will usually put everything right and is probably the best way to do it; a homily on manners would not be appreciated. When he is 19 or 20 his manners may be worse, but you cannot use the same method any longer; you have to think of some method of persuading him that what he is doing is not really a good idea.

It is no use hankering for Lord Palmerston. The world is no longer what it was in his day. We have to think out the solution of our problems, and one of the immense differences which I have been trying to describe is that it is no longer a question of dealing with one monarch. In all these countries now a passionate, excitable, and ignorant population dominate the scene, so that the old diplomacy of the ambassador is no longer sufficient. The Russians have had the vision to see that. In most cases, at any rate where the Government is not completely subservient to them, they take very little notice of the Government; their appeal is directed to the public.

The fashion in these days is to go in for psychology. We analyse the nasty sentiments entertained by all our friends; we can see through their complexes, which make them such bad company, at once. Why do we limit this to individuals? Countries have psychologies in the same way as people, and the psychology of countries is based on the same things, namely, their heredity and their environment. Different races show different characteristics. Some are terribly unstable; some are exceedingly tough; some are loquacious; some are not. Some of this is in their make-up, but in addition there are climatic considerations. If the country is very hot and damp the people will sit about in the shade; if it is mountainous and cool, they will be very

energetic and run about all day long. A great deal will depend on what has happened to them—what they have suffered, what wars they have fought, what forms of government they have had, and so on. For every single country, all these different factors affect the opinion of the public.

This is just as much an exact science as psycho-analysing your little boy. It is merely a question of method and study. The materials are undoubtedly available to psycho-analyse the Egyptians, or the Russians, or the Syrians, or the Iraqis, or anybody else; and they are all quite different from one another. If you live at the other end it is surprising, not to say alarming, how often the British Government—not to mention the U.S.A.—says exactly the thing that infuriates these people most. To a great extent, of course, that is because we project ourselves into everybody else.

Incidentally, it works both ways. Some time ago, when I was serving the Jordan Government, I rashly made a number of attempts at writing articles for the British Press. I had to show these articles, of course, to the Jordan Government before I could send them, and never once did they accept one; they crossed everything out and put in what they felt, and the result was that they produced something which would have driven anyone in England into a fury. We make the same sort of mistakes.

In former days, when we had only a sultan or a rajah or a grand vizier to deal with, he might be an extremely enlightened individual, or our Ambassador could explain away the things we said, but when we are dealing with a nation we cannot do that. Is not it worth while trying to study the psychological side? It seems to me that, in these days, international psychology should be a major subject of academic study. Nearly every science which has emerged into practical results has started by being an academic study. I think that there should be chairs at the universities and scholarships and degrees, and that everything possible should be done to encourage the study of international psychology from the academic point of view in the first place, so that we shall realize that the world is full of nations with their own personalities. Anyone who commands or has to deal with large numbers of men will not, if he is wise, deal with them all as ciphers; he will try to know each one and discover how to handle the men with whom he has to deal. It is only in the international sphere that we assume that the world consists of numbers of other Englishmen who will think as we think and must accept what we say and interpret what we say as we would interpret it.

This, it seems to me, is the lesson of the years which have passed since the end of the second World War. As I have said, when a boy is very small smacking is the best answer, but the time comes when other methods must be available. No one that I have met has been able to define what is national degeneracy. Most people seem to think it means that everyone is very timid and nervous and afraid to go to war. If that is the case, we do not seem to have caught it; but if degeneracy is rigidity of method, then I think that in some departments our situation is alarming.

We must keep up to date and think ahead. It is terrifying to me to see how often the Russians, who have never even been there, produce a closer approximation to the mentality of some of these peoples than we, who have been coming and going across Asia for 300 years. If only we can realize that new methods are required, and what those new methods are, it seems to me that we shall still be able to maintain all our vital interests with these truly delightful people whom we have known for so long. But if we insist on continuing to use the methods of the Victorian age, I do not think we can expect to be able to understand them, or that they will any longer be able to understand us.

DISCUSSION

BRIGADIER K. B. S. CRAWFORD: It seems to me that in this task of getting at the Arab peoples we, as against Russia, start with a great disadvantage. The Russians come along with the name of a revolutionary government, and that predisposes the Arab peoples in their favour. The Arab peoples understand the acts of a strong man. Our position is exactly the reverse of this. We come under the name of an ancient monarchy and stand, therefore, at a great disadvantage. All our recent acts, as in India, in Palestine, and above all in Syria, are, in the eyes of the Arabic-speaking peoples, acts of weakness. Does it not come to this, that the universal rule since the days of Darius, and even before then, has been, and still is, 'govern or get out'? The policy of psycho-analysis comes between these two policies—the policy of governing and the policy of getting out—and I do not think that it can ever succeed.

THE LECTURER: I quite agree that we are faced with many difficulties and, as the speaker said, it is a great advantage to have had a revolution. That happens quite frequently in the Middle East, and I have often noticed how useful it is to be able to wipe off the slate all your previous misdemeanours by saying, "Oh, that was the previous Government." I suggested that the British Government might try that, but it did not fall in with my proposal!

The speaker suggested that it is necessary to govern strongly or get out. I admit that this is a difficult matter because we have got used to governing, and therefore if we are not governing we feel that we are not doing our stuff. But is not the most important requirement of this area the freedom to pass through it? We were free to pass through for 200 years, and during that period we never governed it. We have attempted to control this area only since 1920, and we have had unending bother ever since. I suggest, therefore, as an alternative to what the speaker said, that in this area it is not necessary for us to govern; what is vital is to maintain the right of way. The danger to this right of way is not from the people living in the area but from other nations, which means, in present circumstances, Russia. Our problem, therefore, is neither to govern nor to throw up the sponge and say it is hopeless; our problem is to find some method by which we shall always be able to come and go.

That presupposes that the Russians do not clamp down on the whole area. It may be that they will themselves come in and take it all over. That would lead to a different problem, but hitherto the Russians have not governed it either. The competition between the two sides has been a competition in winning the minds of the inhabitants and we are still in that stage; we are still competing in persuading the inhabitants. I believe it to be wrong to hanker after the time when we were governing, because we cannot do it today. The fact remains that we enjoyed this right of way better when we did not try to govern the area than we have since we tried to do so. I believe, therefore, that at the moment it is the psychological approach which will pay us best, and I do not believe that we are necessarily defeated or on our way out from that angle.

ADMIRAL SIR GERALD DICKENS: Would the lecturer tell us if we would get on better in the Middle East if we pursued a policy of approach not necessarily the same as America. I, of course, do not refer to general strategy. I fear this is rather a hypothetical question.

THE LECTURER: I think that the answer is yes and no. I suppose that between all partners there has to be a certain amount of give and take, but the power of America today is so immense that we just cannot afford not to co-operate. It is true that on many local, parochial questions the Americans give us more trouble than assistance. When one has lived at the other end there is a tendency to put the blame on this end, and I think that a great part of the trouble is due to the fact that the fellows at the top are not agreeing.

In Jordan we had very good liaison, but that has not been so in every country. I believe that it is, as the speaker himself suggested, slightly academic to ask whether we would do better without the Americans. We cannot do without them today, and therefore the only course to take is to come to a better understanding with them. We can turn this international psychology on to the psychology of the U.S.A. as well!

VICE-ADMIRAL SIR SYDNEY RAW : The lecturer did not mention the question of Israel and its relations with the Arab States. That may have been deliberate, but my question is this. Cannot the U.S.S.R. stir up trouble by saying that this 'canker in the Middle East' has been put in and supported by the West?

THE LECTURER : They have said that many times already. We always let them off rather easily on this. In 1948, when the fighting began between Arabs and Jews, the Russians were on the side of the Jews, and had it not been for Russian assistance Israel would have found herself in much greater difficulties than those which confronted her. That, it seems to me, is one of the points which might usefully be brought out. I believe that Russian policy in the Arab-Jew struggle lays itself open to the most frightful exposures. The Russians have played fast and loose, taking one side or the other according to the most opportunist politics.

It is true, of course, that the fact that we assisted the Jews to create Israel is the principal difficulty which we encounter, and we cannot get away from that. When one knows from the other end, however, the interpretations put upon everything that we have done, one realizes that those interpretations are 500 per cent. worse than the facts.

The propaganda directed against us is that the whole plot was a Machiavellian, carefully thought out scheme to destroy the Arabs by building up the Jews. That is far too intelligent a policy to have originated from this source. It seems to me that it is far better to tell the truth—which is that the people here did not read the files when they took this decision—than it is to laugh it off and say, "Let's talk about something else." It is the principal obstacle to a better understanding with these Arabic-speaking peoples. I should like to see everything about it exposed; I am certain that nothing that could come out of that exposure would be a fraction as bad as the interpretation put upon it by our enemies.

GENERAL SIR GEOFFREY BOURNE : At the beginning of his talk the lecturer rightly pointed out that this area was a corridor or a bridge between Europe and the Indian Ocean. I suggest that it contains a corridor at right-angles to that, a corridor between Russia and Africa; and I am, if anything, more worried about that direction than about the one where, admittedly, communications are at present a bit shaky. What worries me is the penetration of Communist influence, even if not direct Communist influence, from north to south into Africa. The map shows that there is a very small gap between Syria and Egypt, consisting mainly of Jordan.

The lecturer said it was a question of psycho-analysing the countries concerned, and I agree. We are engaged in a psychological and political war, and I do not believe that the Middle East will be won or lost by firing shot, but by psychological warfare. My question is this. If we take the trouble to analyse these countries in the way that the lecturer has suggested, what are the odds on our keeping that gap open between Syria and Egypt and against the building of a solid bridge for the entry of Communism into Africa?

THE LECTURER : I usually mention, when referring to the importance of the Middle East, the fact that it is also a bridge which connects Africa with Europe and Asia. I am sorry that I did not do so today, but one cannot say everything in an hour. I agree with the questioner that that is the case; it is also and equally a connecting link between Europe and Asia on the one hand and Africa on the other. He asks what the odds are. They are the same as the odds on winning the psychological war. I should not like to express the exact odds, but the fact remains that we have not tried to use these methods at all.

There seems to me to be no doubt that if we do use them we should not use them only in the Middle East. As time goes on the world becomes smaller, and in fact it is no longer possible to use a method in one country which does not extend to the rest. You cannot say something to the Middle East which you do not want the Africans to hear. I did not mention Africa in my talk because I was not dealing with Africa, but exactly the same methods would apply to Africa, in the sense that psychology is of vital importance. We

would not say exactly the same things to the African countries, but we would say things in which they are interested.

I agree that it is another fact of vital significance about this area of the Middle East that it is a north-south bridge to Africa from Asia and Europe.

THE CHAIRMAN : I am afraid that it is necessary to close the discussion at this point because Sir John Glubb has a train to catch. I should like, before thanking him for a most interesting lecture, to make one observation of my own. It seems to me that Russia is in a very advantageous position for making trouble in the Middle East. At the moment she has no material stake there. She is not, as is the West, vitally interested in this passageway which Sir John Glubb described, nor has she any particular stake in the way of oil, and therefore she is at liberty to stir up trouble in the way that she is doing without damaging her own interests. I agree most heartily with the lecturer that it is time that we took up the cudgels and attacked this problem by the methods which he has outlined.

On your behalf I thank him most sincerely for a most illuminating and interesting afternoon. (*Applause.*)

PROBLEMS OF THE NORWEGIAN CAMPAIGN, 1940

By PROFESSOR DR. WALTHER HUBATSCH

Professor Walther Hubatsch, the distinguished German historian, was recently invited to lecture in the University of London on some aspects of the campaign in Norway, 1940. By courtesy of the University and of Professor Hubatsch, we are privileged to print his lecture.—EDITOR.

AS the English proverb has it, "The onlooker sees most of the game." Five years ago, when I published my first book on the Norwegian campaign of 1940,¹ a senior German officer, who had, as he thought, played a leading role in the planning of the campaign, wrote to me that he was amazed to encounter himself again in a wider historical context, taking part in an enterprise the size and direction of which he so far had not suspected. But what more important task can the historian of today have than this; to help to find the correct point of view from which the significance of historical events can be estimated; to gain detachment in order to investigate happenings which have now become part of history; to analyse and to describe them?

The Norwegian campaign occupies a special place among the campaigns and operations of the second World War. Its duration was relatively short, its theatre restricted, and the forces engaged limited. It was the first example of a modern combined operation by land, sea, and air. The combat conditions presented new and unusual problems, not only to the troops but also to the commanders and their staffs, problems which all participants solved with courage, soldierly efficiency, and vigour. All, Germans and British, Norwegians and French, share in the campaign's glory. But this study is not concerned with the military glory of the various nations involved. The history of this campaign presents a number of general historico-political, strategic, economic, and technical problems, which can today, after 18 years, be considered impartially and unemotionally as objects of scientific investigation.

Norway has only existed as a political problem involving Germany and England since 1905. The attitude which Germany adopted in the conflict which led to the separation of Norway from Sweden lies beyond our scope; but that attitude can only be described as correct. Germany showed no political interest in Norway until the first World War, and the frequently expressed enthusiasm for the 'Northland' was anything but an expression of a genuine political programme or ideal.

German submarine warfare during the first World War tore considerable gaps in the Norwegian shipping and thus deepened further an instinctive dislike of Germany among the Norwegians. But it was only through the person of Vidkun Quisling that Norway became an ideological problem. His aims, near enough related to National Socialism, made it appear as though Norway might one day give up her cautious reserve towards Germany and, under a similar political régime, adhere to the German line more closely than she had before.

This was a political misconception from the outset. Norway as a great maritime nation, holding fourth place in the world's merchant fleets, had been dependent on Britain since 1905. To tie Norway to a continental block would have involved ignoring the Anglo-Saxon maritime position and would have endangered the basis

¹ Walther Hubatsch: *Die deutsche Besetzung von Dänemark und Norwegen, 1940.* (Musterschmidt-Verlag, Göttingen.) 1952.

of Norway's economic and national existence. The Quisling problem was not one of vital importance; it was a party conflict which concerned the Norwegians alone.

It is more difficult to deal with the question of the maintenance of Norwegian neutrality during the second World War. The recent publications of the member of the Norwegian Storting, Scharffenberg, as well as the previously published Norwegian White Books, have made apparent how elastically the Norwegian Government interpreted the concept of neutrality. That this could prove disadvantageous to Germany was shown by the *Altmark* incident. One may doubt whether this actually was a one-sided violation of neutrality. The vital issue is not the British attack on a German auxiliary in Norwegian waters, but the fact that the Norwegian escort and its ceaseless wireless messages contributed, willingly or unwillingly, to the mounting of the British attack on this vessel.

Considering the neutrality problem in this light leads to the next question; did the German surprise attack of 9th April, 1940, violate existing international law? This question is considerably more difficult to answer. It must be stated that in spite of all pressure exerted on Norway through her maritime contracts, etc., England had always remained within the bounds of international law, insofar as she transmitted diplomatic notes containing specific warnings before she ever took action. This incidentally also holds true of her relations with Sweden. Britain did not even leave the firm ground of international law when she announced that mines would be laid in Norwegian waters. Only the fact of mine-laying itself must be considered a violation of Norwegian neutrality.

Military reasons, if no others, made impossible any advance notice of the German enterprise, though indirectly some notice may well have been given by the torpedoing of the German transport *Rio de Janeiro*, loaded with troops and equipment. Therefore one may ask whether it would not have been sensible to interpolate diplomatic action sometime during 8th April, threatening German counter-measures against the mine-laying activities of the British. It is precisely this fact, that no warning was given of the invasion, that caused so much bad blood in Norway.

Among the political problems the so-called Allied help for Finland played a role of considerable importance from 1940 onwards. As we know it was to consist of several English and French divisions whose first task was to occupy Narvik, the Norwegian-Swedish iron-ore railway, the Swedish ore district around Gallivare, and the Swedish port of Lulea. Then, after securing these areas, a division was to be sent to the Finnish front.

On the German side it was felt at the time that the establishment of an Allied base on the Baltic coast would have quickly brought about the total defeat of Germany. Since then, German diplomats and historians have argued the thesis that this opportunity might well have been used to create antagonism between the Allies and Russia in Finland. But such an object would hardly have been secured by the dispatch of only one division, which possibly would not have been pushed beyond the zone of communications. It was quite well known in Finland that this so-called aid was only a pretext. Finland, therefore, preferred the painful step of negotiating with Moscow in order to resolve her difficulties rather than relying on the uncertain Allied offers of military assistance, which in any case would have taken effect only in Norway and Sweden.

Finally it is necessary to dwell briefly on German relations with Sweden. It is possible to speak of benevolent Swedish neutrality towards Germany at the beginning of this war; but public opinion became very disturbed and bellicose when Norway

was occupied by German troops, when, in the process of building up a supply system, military through-traffic to Narvik and Trondhjem was instituted, and when German planes several times flew over Swedish territory. Subsequently the rapid termination of the Norwegian campaign was able to bring about a calmer, or at any rate more resigned, climate of public opinion, so that until the end of the war German-Swedish relations were never seriously disturbed by the presence of German soldiers in Norway. The measures of German civilian administration, on the other hand, such as deportations of students from Oslo, measures against Norwegian officers, the Church, etc., called forth violent reaction which is not forgotten to this day. Yet demonstrations of sympathy by the Swedish population, for instance at railway crossings when German troops passed through, also were not unusual.

While it was not so much by diplomatic means as by armed intervention that the political problem of Norway was decisively resolved, the planning of the enterprise nevertheless posed a series of strategic questions. The necessary conditions for a German occupation of Norway are to be found in the outbreak of war between Germany and Great Britain in September, 1939, and in the benevolent neutrality of Russia. The importance of this neutrality was shown by the complete lack of Russian interference with the occupation of Norway. Furthermore, the German garrison of Narvik would have had to cease resistance after a few weeks had it not been that one fully equipped supply ship, the *Jan Wellem*, reached it from Russian territorial waters. It is evident that the Russian Government preferred to see the Germans establishing themselves in Norway, with the intensification of the war which this was likely to involve, rather than to have the British occupy the country.

Nor would the appearance of the British by itself have made German intervention necessary; for the situation which prevailed in the North Sea in 1914 seemed likely at first to recur. But the lessons learned in 1914 were to have a decisive influence on both sides. The considerations of naval strategy, for which Tirpitz was later blamed for having ignored in his naval programme, in 1913 had led political and military authorities in Britain and France (not, however, in Germany) to an exchange of views on the need to occupy Norway if war with Germany broke out. In October, 1939, the French General Staff reverted to these plans and all the more readily since the memories of Verdun during the first World War made a frontal attack on the Siegfried Line seem out of the question. An outflanking movement through Norway, with the consequent occupation of the main source of German ore supply, seemed far more likely to lead to a rapid and bloodless decision.

But the Germans had also learned from the first World War and were no longer prepared to let themselves be cut off by the British blockade in the narrows of the Heligoland Bight. The lessons of naval strategy, the need to protect one's own sea lanes and to disrupt those of the enemy, made both sides take Norway into consideration in their planning. On the German side, however, naval weakness made such an expansion of commitments seem at first inadvisable, though memoranda from naval officers had for some time been suggesting such a move.

It was the economic issue, the necessity of guaranteeing the uninterrupted importation of Swedish ore, that was finally decisive. Germany's annual peacetime iron requirements were 15,000,000 tons. Of this, 11,000,000 came from Sweden, 4,500,000 of them via Narvik. We can now see why Norway was at once a political, military, and economic problem, and can only be considered under all these aspects. The whole conduct of the war from the German point of view seemed to depend on the possibility of keeping the Norwegian sea lanes clear for German ore transport.

It was in this neutral area that British and German interests clashed. Once it became apparent that Britain intended to occupy Narvik, and then the Swedish ore-bearing areas and the nearby ports, Germany had good cause to set the necessary counter-measures on foot.

Hitler's personal concern with the plans of campaign has often been overestimated. Today it is clear that he approached the Norwegian campaign reluctantly. This does not absolve him from the responsibility which he had taken on as political head of the state and as military Commander-in-Chief. Hitler's strategy was characterized by his lack of tradition, and consequently lack of experience. Lack of cool consideration, absence of self-criticism, wishful thinking, these faults can be found in all his plans. This talent which he lacked he tried to replace with energy and ruthlessness. This led him to behave in a fashion which the entire system of European states had persistently combated since the days of William of Orange.

It had been the mistake of Charles XII of Sweden—a mistake not even shared by Napoleon—to think that in war military measures alone are successful. Undoubtedly Hitler was encouraged by a number of senior authorities. A military project, it is true, cannot be equated with its execution; but senior German officers realized too late just how far Hitler was prepared to go. The first task which Hitler allotted to the working staff organized within the German military headquarters at the beginning of January was to determine how far an occupation of Norway seemed feasible in relation to Germany's continental strategy. The first thing that obviously had to be determined was whether an attack on the long expanse of the Norwegian coast seemed desirable at all, in view of the situation in the West, and whether it would not detract from the real object of the war, the defeat of the principal enemy. But this initial directive was in fact taken to mean that the occupation of Norway had already been decided upon and that it only remained to be settled how many units should be allotted to it. It is doubtful whether all the relevant considerations were carefully weighed, especially the political consequences. The German Foreign Office was not consulted and the Chief of the German military headquarters, Field-Marshal Keitel, did not include political considerations within his field of vision.

The naval officer responsible for planning the operation was also of the opinion that "it would only be justifiable to involve the Navy if an enemy threat to Norway absolutely forced Germany to do so. The responsibility for this decision rested on the political leaders who alone knew every aspect of the situation, and who had to bear the responsibility for this critical move." German military headquarters did not even consider themselves responsible for choosing the right moment to act; it was generally believed that Hitler had all the information he needed with which to make the correct decision.

There is no record in the archives of the High Command that the role of the Norwegian campaign in the general plan for the conduct of the war was even discussed. In the early stages the planners might have considered whether there was not an alternative to securing the sea flank from Oslo to Narvik, a wide-sweeping movement on exterior lines involving substantial forces. Could not the protection of the ore districts and ports have been assured by a strategy of interior lines based on strong-points which would have meant only the occupation of territory around Lulea, Gallivare, Kiruna, and Narvik? But this would not have secured the sea lane Narvik-Trondhjem-Stavanger-Germany, and it was just the security of this sea lane which the Navy considered so vitally important.

It must be added that the flanking position of Stavanger was to be put out of action, but this might have been done by the Luftwaffe. For the Luftwaffe would in any case have needed the air bases in Denmark, and it was in fact the Luftwaffe which wanted the occupation of Denmark as the necessary preliminary step before the Norwegian campaign.

Consideration of the strategic problem leads one to the political decision: either to secure the Swedish ore (the *internal* solution) or to appropriate the apparently vital line of communication Narvik-Stavanger and at the same time establish a flanking position which would include Denmark (which we may call the *external* solution). The control of the Norwegian coast seemed best calculated to prevent not only the interruption of the ore transports but also the use of Norwegian air bases by Britain and the establishment of British naval bases in southern Norway. In addition, the external solution would cover Germany's flank and a base would be secured from which German forces could attack Britain.

This reasoning, however, was of no importance at this stage of the war and must be judged as such; even though we know that the lessons of the first World War showed that an extension of Germany's bases for naval operations was highly desirable. Norway might become, given favourable conditions, the starting point for flanking operations against Britain by surface vessels, by submarines, and by the Luftwaffe; but the airfields in Schleswig and Jutland proved more suitable for the Luftwaffe, bases for the Navy had still to be built and equipped, and the whole question of supply presented immense difficulties. Even if the conditions had been ideal, and Trondhjem could have been used as a base for surface vessels, the question at once arose whether this would by itself have been enough to open up the Atlantic and so render British sea communications vulnerable. For it very soon became clear that the existing blockade line from Scapa to Stavanger only needed to be turned through 90 degrees to establish a new blockade line between the Shetlands, Iceland, and Greenland. This meant that the real pivot of naval strategy in the war between Germany and Britain became the possession not of Norway but of Iceland; yet this was beyond the capacity of the widely scattered German forces which, in June, 1940, had to protect the European coastal waters from Narvik to Dunkirk.

The Navy had to bear the main brunt of the whole enterprise. It may be asked whether its strength and the composition of its forces really made it a suitable instrument with which to occupy such a coast and to wage from it that struggle in the Atlantic which was presumably included in the operational aims of the campaign. When Admiral Carls assumed command of Navy Group East on the evening of 7th April, he summarized his appreciation of the situation as follows:—

"I think we can achieve the vital part of our task, and therefore we shall achieve it if we carry it through with ruthless determination and unrestrained vigour. The risk is considerable—bad enough during the first part of the operation and even greater in the second, on the return journey home. We shall incur losses. But the operation is so important that they would not be too heavy even if the greater part of the surface fleet were lost. We must reckon from the outset on a total loss of 50 per cent. unless particularly favourable conditions obviate both Norwegian and British intervention."

The fact that a number of vessels were used in landing operations and coastal warfare which were better suited by their construction to operations in mid-Atlantic shows that from the very beginning the German Navy did not have enough forces to fulfil both tasks, which in retrospect raises the vital question, whether a somewhat

different composition of task forces for the landing operations would not have improved the subsequent acquisition of bases from which to carry on naval warfare.

The special difficulty for the conduct of air warfare in Norway lay in the unfavourable distribution of air bases and in the vital need to fly as far as Narvik from the very first day. This problem could only gradually be solved, and its difficulty lay rather in technical organization than in any attrition or destruction actually suffered by these easily mobile forces. In Norway the Luftwaffe emerged for the first time as an independent branch of the Wehrmacht with its own operational role.

One of the remarkable things about the campaign is the way in which each of the three Services was used in turn. The Navy was dominant until the landing; the Luftwaffe, with its fighter and transport missions, covered the period up to the assembly and deployment of land forces (it was the Luftwaffe which decisively mastered the crisis which occurred during the landings); and the Army finally carried out the complete conquest and occupation.

From the outset the Army, except for the mountain divisions, participated only with recently mobilized units. The refusal of the Army General Staff to tie up stronger forces in this minor theatre (as they thought it) arose from their fear of being not strong enough on the decisive Western front. The inadequate allotment of mortars, for instance, made itself sadly felt in the fighting in the Norwegian mountains. The limited allocation of tanks, on the other hand, was justified by the unsuitability of the terrain. The proportion of German to Scandinavian divisions was one to one. This proportion could have changed very rapidly to Germany's disadvantage if, for instance, Sweden had declared its solidarity with the other two countries. But in planning the campaign this possibility was not considered, any more than was the equal possibility of British landings to support the Norwegians—though from the beginning this possibility was restricted by the difficulty of transporting and keeping supplies going to the forces by sea. Norwegian efficiency and morale, it was later found, were underestimated.

The dominant belief of a peaceful entry into the country outweighed any fear that the operation might lead to the opening of a northern front. The restriction on the number of German forces available inevitably led to the subsequent crisis at Trondhjem and Narvik, which goes to show how little the High Command had been prepared for a more serious struggle. Besides, the General Staff of the Army, unlike that of the Navy, did not believe that the war could be decided in the north, and that timely preparations should therefore be made to counter any attempted enemy invasion. On the contrary, in the view of the staffs of the Army and the Luftwaffe, the occupation of Denmark and Norway was only of secondary importance, though it was in the interest of the Army General Staff, which foresaw an obstinate and long-drawn-out struggle in the west, to have this northern flank secure.

As yet no one had any experience or had made any preparations for such combined operations as those against Norway. The organization of the High Command on the whole justified itself: it constitutes an imposing achievement of co-operation between the three Services. Certainly there were difficulties within each Service. When high-level decisions had to be taken so far-reaching in space and time, friction could not have been prevented. The employment of the second mountain division from Oslo between Trondhjem and Narvik was certainly not very happy, but it could not be avoided. In the same way it was only after experience of naval operational staffs in combat that the integration of Fleet Command afloat and Naval Group Command ashore could be introduced. The Luftwaffe also had trouble

in sorting out the command structure of 5th Air Fleet and X Air Corps; and a lack of technical equipment for effective intercommunication was common to all three Services. In the Norwegian campaign more than in any other theatre of war we see the fascinating problem of how different the impressions gained by men at the front could be from those held by the High Command; but in this too the will to co-operate in essentials overcame the difficulties and mastered the crises.

Opinions about the object and the justification of the campaign may differ, but the military events have by now been elucidated by British, French, German, and Norwegian scholarship. It is clear from their works that the achievements of the German units employed were remarkable, and they have been generously recognized by their former opponents.

The German losses in this campaign were about one-third higher than those of the British, Norwegian, and other allies put together. The losses of the air forces and the navies were about equal on both sides. Apart from this, a number of German warships and some transports were damaged and put out of action for a considerable time, with the result that the Navy was unable to exploit the newly won bases with its heavy units as fully as had been hoped.

The Norwegian campaign has a special place in the history of warfare as the first combined operation of the three Services. Critical examination of the campaign certainly reveals that Hitler's generalship failed at the first appearance of difficulties. We can already discern that interference in matters of detail which was later to have such tragic results, but it was made up for by the determination of the intermediate commands. On the whole the successful outcome of the campaign speaks for the quality of planning and execution. It was only later that the successes won against all the principles of methodical warfare helped to make surprise and violence into a system which in the long run could not work. On the Navy, however, the influence of the campaign was to be just the opposite. Here the heavy losses in shipping and the temporary limitations imposed by damage led to a greater degree of caution which was soon to become clearly apparent in the planning of Operation "Sealion." Finally, though the High Command acquired a great deal of useful experience, it simply increased the size of the *Wehrmachtführungsstab*, and did not attempt to put through any thorough rationalization of the machinery of command.

All three Services learned tactical lessons. The Navy had some unpleasant surprises from their faulty submarine torpedoes. The use of fast cruisers against coastal fortifications went against every rule of naval tactics; the concentration of ten destroyers in the corner of a fjord with no reserves of fuel or ammunition rendered these fast vessels helpless; a vigorous flotilla command might, if it had been fully apprised of the situation, have been able rapidly to restock and send home at least three to four destroyers. British sea transportation was intercepted only once, and even then reconnaissance had been inadequate.

The Luftwaffe proved less effective against naval targets than had been expected. Despite a hail of bombs lasting for hours the cruiser *Suffolk* succeeded in getting back from Stavanger to Scapa. But in the forward area the Luftwaffe achieved great success. The British bridgeheads at Namsos and Andalsnes could not defend themselves with their light anti-aircraft guns without fighter support. As for the Army, its units reached Norway, after the sea voyage and its attendant losses in men and material, in a condition of reduced fighting effectiveness. Units were so mixed up that improvised battle groups of unequal value had to be organized. There was also a general lack of draught equipment for the artillery, as the loss of

horses on torpedoed transports was always 100 per cent. But this improvised organization was able to achieve its ultimate purpose thanks to the uniformity of training, the efficient command organization, and the standardized communications which made rapid decisions possible. And this was to prove decisive. Finally, hardly ever in the recent history of wars have intermediate commanders enjoyed so much scope for initiative as they did in this spacious but minor theatre.

The engagements of minor and minute Norwegian units are also instructive, scattered as they were over large areas with inadequate command organization and communications, and usually dependent entirely upon themselves. The detailed and reliable Norwegian history of the war depicts the exemplary campaign which this small force, familiar as it was with the climate and the terrain, fought to win time. The hurried mobilization interrupted by the German attack, the uncertain attitude of the Norwegian Government and military circles, and the endeavour of the Germans to carry out the occupation bloodlessly—all this resulted in contradictory measures and confusion.

The parallels between the German and the British preparations for the Norwegian campaign are remarkable. Step by step each undertook the same measures. Each side tried to surprise the other. Neither believed the other capable of a similar undertaking. Each aimed at the same thing, the securing of the Swedish ore-mines for their own war economy. Both were influenced in their planning by the lessons of the first World War. The general reluctance to attempt a decision by frontal attack resulted in a postponement of the offensive and led to the hope that the situation might be improved by action in a secondary theatre. If the German attack in the west had begun, as was intended, before the Norwegian campaign, and its impact had been the same as it was in May, 1940, it is questionable whether an encounter in the north would ever have come about. It is worthy of note that on each side the Navy pressed the political authorities to undertake the campaign, and that Chamberlain as well as Hitler tried to find a suitable justification for it. Both hoped to find some good excuse in the Russian-Finnish War.

Another common characteristic was the combination of diplomatic activity with simultaneous military action. Both campaigns were intended as rapid preventive measures. On both sides the military forces were kept remarkably small, since each hoped for a peaceful occupation. Apart from the absolutely essential specialist formations, each side used only newly mobilized units. The total number of divisions required was identically estimated by each as six or seven. Both sides chose the same phase of new moon as the time to act, so as to gain surprise before the onset of the polar summer while yet escaping the hardships of the winter. Undoubtedly both staffs, with their up-to-date outlook, measured up to the highest demands of their time. Their plans had the same sources of strength and weakness. What proved decisive was the energy with which those plans were carried through.

The Norwegian campaign does not deserve so high a place in the setting of the war as a whole as it does if we consider it in isolation. Certainly the Germans did not at first intend to extend the war to the north. If the campaign had simply been a preventive measure of self-defence against an acute threat it might have been justified. But with this went the desire, arising from a mistaken interpretation of the first World War, to secure an expansion of their base for naval operations. It must be admitted that soon after the end of the campaign these attractive possibilities proved to be disappointing, overestimated, or impossible to execute. The British, by occupying Iceland on 10th May, 1940, again locked the gate to the

Atlantic Ocean. With the preliminary conditions lacking, no use could be made of the flanking position against Britain; though we must admit that its possibilities could never have been fully exploited in view of the demands of the Russian campaign, which shortly followed. After the summer of 1941 the occupation of northern Norway did have far-reaching effects, as the British and the Russians were prevented from establishing a foothold there and the Anglo-Saxon convoys destined for Russia were forced to pass close by the German bases. The Swedish ore districts remained assured to the German war economy, and this made it possible to carry on the great battles of 1942-44, so expensive in material.

Looking at it from the perspective of 'Fortress Europe' at that time, one might conclude that the occupation of Norway had been undertaken with an eye to a future conflict with Russia. But this would be wide of the mark. In April, 1940, it was vital to anticipate what was considered to be a very acute threat. Although the Allied plans aimed at the occupation of bases in Norway, and the first measures of minelaying already constituted a flagrant violation of neutrality, the German surprise attack of 9th April, 1940, which overwhelmed the unsuspecting inhabitants of the Scandinavian countries after 126 years of peace, seemed to prove to those people that Germany was determined on military expansion. Thus the performance of German troops of all Services, fighting troops and supply units, the daring plans and the vigorous activity of the commanders, the achievement of a task which was as trying as it was successful, all appeared after the event in a very ambiguous light.

After the end of the war in 1945 Colonel-General von Falkenhorst testified before the Norwegian Commission of Enquiry that the Norwegian campaign meant 'a dispersal of forces' and was 'absolutely unnecessary.' Hitler had created a bogey out of the British threat. An impartial examination of the sources does not completely bear out these views, which may have been due to the bitterness and disappointment of defeat. On the basis of later experience General Jodl, the head of Hitler's operational staff, also judged the Norwegian campaign more critically in 1945 than he did in 1940 by saying: "The Norwegian coast gave us strategically no advantage against Britain." The occupation "tied down 300,000 men in order to protect our conquests, and these remained useless for the remainder of the war."

There is no doubt that the northern flank *did* constitute a threat to Germany. The only question was how seriously this threat should be taken. Was it graver than the threatening Allied invasion of Belgium and Holland? Was it really of decisive importance, a 'matter of life and death'? The German Foreign Office had, on Hitler's orders, not been informed of the extent of the military preparations and had only a marginal interest in the problem; the views that prevailed there were soon found to be over-optimistic. In the Navy there were two schools of thought. Admiral Raeder considered the threat extremely serious: as naval Commander-in-Chief it was his duty to point out the grave consequences which a British occupation of Norway would certainly have on the conduct of the war at sea. What conclusions should be drawn by the political authorities, who had to consider the conduct of the war as a whole, was a different matter. The estimate of enemy intentions proved to be incorrect; but the operations section of the naval High Command was justified in its advice that the first step should be left to the enemy and that their own forces should be employed as frugally as possible.

But it was just this capacity, the power of waiting until the time was ripe, that the senior authorities in the Wehrmacht lacked in the spring of 1940. The coming offensive in the west overshadowed everything. The impatience of the High

Command, their nervousness, their worry over the uncertain outcome, all reveal a basic lack of self-confidence, which developed into the fear that any delay might enable the enemy to seize the advantage. In this atmosphere of tension irresponsible political advisers like Rosenberg, inspired by personal vanity and ideological fantasies, secured a disastrous influence. A dispersal of Allied forces on the eve of the great offensive in the west should have been welcomed by the German military leaders. An Allied move on Lulea would have made a strong impression on Russia. An occupation of the Swedish ore districts by Anglo-French troops would not have been acceptable to the two great Powers of the Baltic. Over this issue the war plans of the Allies reveal a certain lack of responsibility, as Gamelin, the French Supreme Commander, saw very well. The clash which threatened between the western Powers and Russia was prevented, thanks to the unexpected ending to the Finnish Winter War, and it was by German action that a renewal of tension between Russia and the Allies was avoided. The occupation of Norway unwittingly removed all danger of a conflict between these great Powers.

It is tragic that the countries of Scandinavia should not have succeeded in preserving their neutrality in the contest between the great Powers. Even if the German preventive measure in Norway had not succeeded, Allied strategy would eventually have made Sweden a theatre of war, and northern Norway would have become a Russian zone of influence. There is a strongly held opinion, which political ideology powerfully supports, that the war developed according to a logical and inevitable pattern; but we must think what would have happened had any of these very possible events occurred. The German occupation of Denmark and Norway in 1940, the passive acquiescence of Russia, and the neutrality of Sweden was only one possible course of events among several. This much remains hidden from the man who takes historical decisions and believes that he can boldly master the future. Whither the journey leads, that no one can tell.

SOVIET MILITARY DOCTRINE

A STUDY OF THE INFLUENCE OF VON SCHLIEFFEN

By LIEUT.-COLONEL R. H. CAIGER-WATSON, R.A.

ANY investigation of the development of Soviet military doctrine must take into account the impact made on such doctrine by political thought. From the early days of the Revolution there was constant debate as to whether a purely proletarian or Marxist military doctrine, untarnished by foreign or Tsarist influence, was feasible and, if so, on what principles it should rest. The leading protagonist of this idea was Frunze, who maintained that the "character of the military doctrine accepted by the Army of any State is determined by the character of the general political line of the social class which stands at its head."¹ This line of thought was fiercely resisted by Trotsky (then People's Commissar for War) who believed that there was a military science applicable equally to capitalists and proletarians. He was supported in this more flexible attitude by a number of senior ex-Tsarist officers who, having escaped the Revolution with their lives, formed the only trained body of military opinion in Russia. The fall of Trotsky and his replacement by Frunze in 1924 put an end to further argument.

From 1924 onwards scant attention was given in the Soviet Union to academic problems of military doctrine, and the principles which Frunze enunciated in the 1920s remained unchallenged until the emergence of Stalin as a military leader. The victory over Germany, however, gave rise to the legend of 'Stalinist military science' which, up to recent years, has been vaunted as the superior, the most advanced, and in fact the only true military science in the world.

Stalin, writing in 1947, said :—

"We are obliged from the point of view of the interests of our cause, and the military science of our time, to criticize not only Clausewitz but also Moltke, Schlieffen, Ludendorff, Keitel, and the other bearers of the military ideology in Germany. . . . It is well known to all what respect all the military men of the world, including even our Russian military men, held toward the military authority of Germany. Is it necessary to dispense with this unmerited respect? It is necessary to end it. And for that criticism is necessary, especially from our side, from the side of the victors over Germany."²

What in fact has happened and has been happening throughout the formative years of the Soviet Army is simply the filching and adaptation of whatever military doctrines suit the fundamental principles of 'proletarian unity' laid down by Frunze. In this can be found a smattering of most of the German authorities so roundly denigrated by Stalin, as well as the influence of such Western military experts as Fuller, Liddell Hart, Douhet, Marshall, and Guderian.

It is plain that Soviet military doctrine has not been conditioned by the four great Soviet writers and leaders—Marx, Engels, Lenin, and Stalin—despite the assertions of Soviet theorists, but to a decisive extent by Western military thought.

Starting then from this basic assumption, the aim of this paper is to examine the tactical and strategical application of Soviet military doctrine with particular reference to the influence of Schlieffen.

¹ Frunze : *A Unified Military Doctrine and the Red Army*, Vol. 1, 1921.

² Stalin : *Bolshevik*, No. 3, 1947.

POST REVOLUTIONARY DEVELOPMENT

Prior to the Revolution, and indeed for some months thereafter, Lenin and many other Bolshevik leaders favoured "a people's army with elected officers."³ This idea was favoured by the advocates of a 'proletarian' military doctrine, many of whom, like Voroshilov, had begun their military careers as irregular partizans and who continued to show a preference for a loose and decentralized type of organization and command structure. The old partizans claimed to be truly representative of the people; they were the link between the worker and the Army. In short, they said, they were more Marxist.

The argument about organization served to heighten the differences already described which divided the military groups around Trotsky and Frunze. In spite of the 'purity' of Frunze's ideological arguments it soon became apparent that if the new state was to survive in a hostile world it would need much more than a rag, tag, and bobtail army of partizans and workers' militia. Accordingly, on 23rd February, 1918, the Red Army was created, and in June of that year it was officially deemed a 'Regular Army' by Soviet decree. To Trotsky must go the credit for creating and building the Red Army from the disorganized masses of militia, partizan groups, and Bolshevik guards which represented Russian military strength in 1918.

Having created an army, Trotsky promptly set to work on the problems of leadership, command, and staff techniques. Here, in the teeth of opposition which included Stalin, he relied to a great extent on the services of former Imperial officers, and these officers played an extremely influential part in formulating early Soviet military doctrine. They were themselves the natural vehicles for conveying non-Russian military thought, since most of them had been influenced by the writings and theories of men such as Jomini, Haushofer, and Clausewitz—particularly Clausewitz.

Foreign military influence was thus there from the beginning and, although the fall of Trotsky in 1924 spelled the end of many of his ex-Imperial advisers, their ideas were already widespread. A striking indication of this legacy was the Russian *Manual of Field Regulations*. The 1914 (Imperial) edition remained effective until 1925 before the Soviets decided to rewrite it. Yet of the 100 contributors to the Soviet edition which finally appeared in 1929, no fewer than 79 were former Tsarist officers educated in Imperial doctrine.

Both Lenin and Stalin were preoccupied by the writings of Clausewitz, in particular with his concern with the close relation of politics and war, which struck an answering chord in Bolshevik doctrine. The fact that in 1946 Stalin found it necessary to repudiate Clausewitz as a military analyst is a direct indication of the measure of respect the Old Bolsheviks had for him. Stalin in fact absorbed a number of Clausewitz's ideas into the new 'Stalinist military theory' whilst, at the same time, decrying their author as obsolete.⁴ The fact that Clausewitz was the most closely read foreign military writer in Soviet officer circles before 1939 no doubt strengthened Stalin's resolve to puncture this alien reputation.

From the foregoing it can be concluded that, in spite of more recent official Soviet attempts to decry it, the influence of German military science was particularly strong during the formative years of the Red Army. Recent British research concludes even more definitely that such influence was not only strong but continuous, at least

³ Lenin: *Ten Theses of Soviet Power*, 1918.

⁴ Stalin: *Bolshevik*, No. 3, 1947.

up to 1939, and resulted in the outright acceptance of a number of German military ideas amongst which the following are significant :—

- (a) Moltke's theory of uniformity in military doctrine.
- (b) Schlieffen's preoccupation with outflanking and encircling movements in the offensive.
- (c) Bruchmüller's conceptions on the handling of artillery.
- (d) Guderian's handling of armour.

It is now necessary, therefore, to see if this German influence on military theory was put into practice in battle and, more especially, if Schlieffen's methods were used.

THE FINNISH WAR

The main Soviet assault force for the invasion of Finland was concentrated on the Karelian Isthmus and consisted of 12 rifle divisions, one armoured corps, several armoured brigades, and a fair amount of additional artillery. This force, all grouped under 7th Army, and which alone out-numbered everything the Finns could put into the field, was to overrun the Mannerheim Line and go straight for Helsinki. To the north the Soviet 8th Army, consisting of seven rifle divisions and an armoured brigade, was to attack round the northern shores of Lake Ladoga and strike the flank of the Mannerheim Line. Farther north still the 9th Army (five rifle divisions) and the 14th Army (two rifle divisions) were to cut land communications with Sweden and seal off the northern seaboard, thus forestalling any attempt at foreign interference.

Strategically this plan owed little or nothing to Schlieffen. The main striking force was concentrated opposite the enemy's strongest positions on a frontage of little over 50 miles. Its tactic was a strong frontal blow, to be followed by a race for the capital; its associated 'hook' in the north was weak in armour, possessed inferior mobility, and could by no stretch of the imagination be termed the main effort.

Tactically the ensuing campaign displayed even less imagination and can be summed up as an example of the mass use of manpower to overcome firepower—the antithesis of Schlieffen's doctrine. As one Russian officer put it, "... The basic tactic of the Red Army was to crush the enemy by masses of infantry, following the principle 'they can't kill all'..."⁵

In spite of its local superiority and the achievement of tactical surprise the main Soviet effort made very slow initial progress and was finally halted and held on the Mannerheim Line. A resumption of the offensive three months later, when many improvements had been effected within the Soviet command system and many additional formations had been added to the main thrust, met with more success. Thirteen Soviet divisions assaulted over a frontage of 20 kilometres and, not unnaturally, a break-through was achieved. The Finns, however, by throwing in their meagre reserves were able to extricate themselves from the forward zones of the ruptured Mannerheim Line and conduct a fighting withdrawal to a second defensive zone in the Viipuri region. Here fighting was resumed and, by committing the last of their reserves, the Finns were just able to hang on to their main positions. How long they would have been able to do so remains doubtful, because negotiations for peace were instituted by both sides at this juncture and the war ended with the imposition of extremely harsh terms by the Soviet Union.

⁵ G. Ugryumov : *Thirteen Who Fled*, New York, 1949.

Operations on the Karelian Isthmus had confronted the Soviet High Command with no serious problems because overwhelming force was ready to hand as soon and as often as the tempo slackened or a crisis occurred. The lack of tactical finesse displayed by the Soviet formations was thus all the more marked and served to bear out the contention, often expressed in the West at that time, that the 'Russian steamroller' had not changed and that it had indeed become even more clumsy with the advent of the Commissar into the chain of command.

The Finnish War disclosed serious weaknesses in the Soviet command system and taught them a number of sharp tactical lessons. Neither the strategic planning nor the tactical execution can, however, be attributed to German influence and the whole campaign was conducted on lines diametrically opposed to the theories of Schlieffen.

THE RUSSO-GERMAN WAR

An examination of the Soviet military dispositions on the Western Front in the summer of 1941 gives little ground for supposing that their defensive strategy was based on Schlieffen's ideas—in spite of the fact that they had adequate warning of the forthcoming German attack and in spite of the fact that Soviet military manuals stressed the importance of a number of principles in defence which reflect German origins. Thus the 1936 *Field Regulations* define the aim of defence as "An economy of force on a wide front (and preparation) for the blow in the decisive direction," and later on as, "Gaining time for the creation of the necessary grouping of forces for the offensive."

Throughout the theoretical teaching the emphasis was on the minimum necessary forward deployment to cover the preparation and mounting of the largest possible counter-offensive. Yet when the Germans launched their initial offensive on 22nd June, 1941, they were confronted by nearly 80 per cent. of the Soviet active Army deployed well forward with strict instructions to fight a positional defensive battle. Colonel Lederrey, the Swiss military historian, commenting on the Soviet dispositions, says:—

"Considering defence in depth to be something without meaning, the High Command had prepared neither plan nor directive on this subject. Instead of spacing out strategic reserves behind the front it had, on the contrary, piled up its troops towards the front, where aerodromes and depots were exposed to the fire of German heavy artillery."⁶

Lederrey's view is confirmed by General Markov, a senior Soviet Air Force Commander at the outbreak of war, who writes:—

"There were no reserve echelons backing up the front line troops because defence in depth was waved aside as sheer nonsense. No defensive war plans were made or even contemplated. Giant supply depots were filled to bursting with arms, ammunition, and fuel—not in the safe rear but so close to the frontier as to be within range of Nazi heavy artillery."

Further confirmation of this is given from the German side by von Manstein who writes:—

"One of the reasons for the initial defeats was the prevailing strategy which demanded a fight for every inch of ground, with the result that the Germans were able to achieve large scale encirclements. . . ."⁷

⁶ Lederrey: *Germany's Defeat in the East*, p. 25.

⁷ Field Marshal von Manstein in *The Soviet Army* (Liddell Hart), p. 141.

It can be seen from these and many other examples that the initial Soviet defensive strategy was not based on Schlieffen's ideas, and indeed ran contrary to them on almost every count. It was not, in fact, until the Battle of Moscow and the subsequent turn of the tide at Stalingrad that the Soviet High Command began to practise some of the strategical and tactical lessons they had learned in their text books, and which had been demonstrated to them so effectively by the Germans.

The Russian counter-offensive was launched by Zhukov on 6th December, 1941. It comprised seven armies 'of the first echelon' backed by three additional armies disposed to reinforce the centre and both wings. The main effort consisted of four armies directed on the German salient north of Moscow. It seems that the Russian plan was not only to relieve Moscow from this German threat but in addition to enclose the German Central Army Group (von Kluge) in a wide encircling movement, which would then have enabled the Russians to turn their undivided attention to the Northern and Southern Army Groups. Here, at last, is a gleam of Schlieffen but, as so often in the past, the execution fell short of the theory. The counter-offensive, although effective in driving back the German armies threatening Moscow, failed to achieve a wholesale envelopment of the Central Army Group because the Soviet deployment of forces along the whole front was too uniform. No decisive concentration was achieved and it was not possible to build up the reserves which were necessary to exploit the gaps which later occurred.

Once again the geographical and human resources of Russia had made up for an inferior strategy. The armies which Zhukov unleashed were largely reserve formations reinforced by divisions from Siberia and the Far East. They struck at a time when the German armies facing them were at the end of their tether and when the German High Command was divided against itself. It was the steamroller again—but this time the direction was more skilful. The Soviet High Command had assimilated the tactical lessons of the previous nine months, and the Red Army itself was beginning to throw up a galaxy of young generals who were quickly proving their worth. The improvement in technique was progressively more noticeable as the spring and summer of 1942 progressed, but it was not until Stalingrad that the pronounced improvement in Soviet strategical direction, coupled with a number of new and effective tactical methods, became apparent.

Stalingrad has become renowned as the turning point of this war, the beginning of the end for the Germans, and the signal for a succession of Soviet offensives which, in spite of some setbacks, were to continue throughout the next two years and which would bring the Red Army to the Elbe. To the Soviet leaders the operations which resulted in the encirclement and surrender of the German 6th Army were to make up the most spectacular example of the double envelopment—a form of offensive manoeuvre long stressed in Soviet military teaching. Marshal Voroshilov described the Stalingrad operation in terms which would have interested Schlieffen, thus: "For centuries Hannibal's operation at Cannae was considered the pinnacle of the art of warfare. But since 1942, that pinnacle is not Cannae but Stalingrad."⁸

This historical comparison is also made by Major-General Korkodinov, who stressed what he considered to be an important difference between the bourgeois (German) doctrine of encirclement and the modern Soviet (Stalinist) methods: annihilation by a continuing series of operations instead of by one all-embracing movement. He wrote:—

⁸ Voroshilov: *Bolshevik*, No. 24, 1949.

"High tempo and the possibility of dealing a deep blow permit the attainment of the decisive aim—complete annihilation of the enemy. This aim in the whole extent of military history has been most completely attained with the preliminary encirclement of the hostile forces. The realization of Cannae was always the ideal of strategists striving for the decisive aims in war. Therefore, encirclement and annihilation of the major forces was a very frequent phenomenon and, in those cases where it succeeded, it created extremely favourable conditions for the encircler—especially if he had a great (two or three times) numerical superiority.

"In distinction to the past the Fatherland War, beginning at Stalingrad and ending in Berlin, represented a complicated series of operations crowned by the encirclement and annihilation of large groups of German-Fascist troops, although many of these operations (Stalingrad amongst them) were conducted without general superiority over the enemy."⁹

This preoccupation with encirclement in the offensive was not borrowed from the Germans as a result of their operations in Russia; on the contrary the idea was deeply rooted in Soviet military doctrine long before the war.¹⁰ It was simply that prior to Stalingrad the Soviet High Command had been more preoccupied with avoiding encirclement than with initiating operations to bring it about.

A comparison of the forces engaged at Stalingrad is interesting. The German 6th Army in the Stalingrad area itself, together with elements of the 4th Panzer Army, comprised some 22 divisions. To the north-west the Axis front was held by the 3rd Rumanian Army—a force which may be discounted since it was broken and put to flight in the first Soviet onslaught. Opposing the German 6th Army, and 'containing' the Stalingrad area, was the Soviet 62nd Army, a weakened force of four infantry divisions which had borne the brunt of the earlier fighting. The encirclement operation was mounted from the north-west and south-east: the northern arm of the pincer composed of three shock armies totalling some 16 divisions; the southern arm with two armies totalling six divisions. These forces were to conduct the 'tactical encirclement,' whilst on their flanks other groups of armies would reach out in a wider hook to seal an outer perimeter and prevent German reinforcements from reaching the encircled 6th Army.

It would seem, therefore, that the Soviet claim to have achieved the tactical encirclement of the German 6th Army with something like parity of forces is justified and, not unnaturally, they cash in on the conclusion that the success of the operation therefore lay in their ability to concentrate superior forces in the 'main directions,' thus supporting fulfilment of their doctrine.

This concentration of force for the 'decisive blow in the main direction' was the key factor in Soviet offensive doctrine and went hand in hand with their preoccupation with encircling manoeuvres or, better still, double envelopment. In the 1940 edition of *Field Regulations and General Tactics*, a distinction was made between a 'holding group' and a 'striking group' within any force. Thus, in the rifle division, "The striking group is assigned two-thirds to three-quarters of the infantry—not less than two regiments . . . the holding group is usually assigned not more than one rifle regiment."¹¹

⁹ Korkodinov: *Morskoï Sbornik*, 1946, quoted by Garthoff in *Soviet Military Doctrine*, 1954.

¹⁰ *Soviet Field Regulations*, 1936.

¹¹ *Obshchaia Taktika*, Vol. 3.

Although subsequent Soviet manuals have modified this categorical allotment of effort and have abolished the term 'holding group,' the emphasis on concentration at the decisive point together with the complementary economy of force in 'secondary directions' is still maintained.

At Stalingrad, therefore, the Soviet High Command achieved a classical double envelopment. Their success was not only due to the obstinacy of Hitler in refusing to permit a German withdrawal, it was also made possible by three positive Russian actions:—

- (a) The attainment of strategic surprise at the Don crossing.
- (b) The decisive concentration of force at the weak (Rumanian) flank.
- (c) The employment of tactics unusual for them, such as deep penetration by motorized columns, thus achieving tactical surprise time and time again.

The conduct of subsequent Soviet operations in the war against Germany shows many further examples of encirclement including Korsun-Shevchenkovsky (10 enemy divisions encircled); Berezina (10 divisions); Jassy-Kishinev (22 divisions); Budapest (13 divisions); Berlin (over 13 divisions); Minsk (about 11 divisions); North-west Latvia (10 divisions); East Prussia (about 12 divisions); although most of the double envelopments of 1943 to 1945 were carried out with greatly superior forces.

To sum up on the Soviet offensive campaigns in the second World War, it is tempting to read into the strategic direction of some of the larger offensives more than a hint of the Schlieffen idea simply because in so many cases the Soviets employed a preponderance of force in a main flanking thrust. But this is surely no more than the application of a tactic known to military leaders since Hannibal, a tactic made doubly attractive to the Soviets since they disposed of sufficient mass never to jeopardize the 'holding' or 'secondary direction' and were able by virtue of their vast resources in both manpower and firepower to concentrate decisively at will.

There is little doubt that the Soviet preoccupation with double envelopment and encirclement was most marked even before the war, but there is no evidence to suggest that this arose from a study of Schlieffen alone.

POST-WAR DEVELOPMENT, 1945-54

During 1945 the Red Army was renamed the Soviet Army and an extensive reorganization and retraining programme was put into effect in an attempt to rectify the weaknesses in organization and tactics which had become apparent in the closing stages of the second World War. The Army had been successful in the field, but it was predominantly trained and organized for offensive operations on a massive scale and its whole structure was unbalanced. The aims of the reorganization were:—

- (a) To create basic line divisions suitably organized and equipped for specific roles.
- (b) Decentralization in the control of supporting arms and closer integration of such arms within combat formations.
- (c) To complete the motorization of transport.

The interesting thing about this reorganization was that it was not accompanied by, nor did it result in, any major changes in tactical doctrine. On the contrary, it appears to have been undertaken with a view to producing formations more capable of the very tactics which had proved successful in the war against Germany. The principles on which the Red Army had operated during 1941-45 were basically similar

to those current in Western armies at the time. These principles were well known but often inefficiently applied; yet because they worked and because, due to overwhelming numerical superiority, the application of these principles appeared to have won the war for them, the Soviet authorities rechristened them 'Stalinist' and retained them.

For nine years, therefore, after the end of hostilities Soviet military doctrine merely extolled and elaborated the tactical methods of the second World War whilst, at the same time, disclaiming any foreign influence in their formulation. Emphasis on offensive manoeuvre with the concentration of mass at the decisive point and a strong predilection for double envelopment continued to appear in all Soviet teaching. Colonel Louis B. Ely, a U.S. intelligence expert, writing in a recent assessment of the Soviet Army says:—

"The military doctrine of the Soviet Army . . . emphasizes the value of enveloping manoeuvre. Here again, however, it tends to over-emphasize; the double envelopment is heavily stressed, without the Westerner's proviso of carefully checking its practicability. . . .

"On the defence, Soviet doctrine distrusts dispersion and rifle divisions tend to place all battalions in line, as the Soviet soldier is . . . supposed to stand fast."¹²

Confirmation that no radical changes in Soviet tactical doctrine emerged from the second World War is also given in recent U.S. Army publications devoted to Soviet post-war tactics. The conclusions reached by the authors may be summarized under the two main types of operations—offensive and defensive. On the former it was generally concluded that due to the existence of more or less uninterrupted fronts, the beloved encircling movement would have to follow a frontal penetration and that this penetration would be achieved in narrow sectors *by employing enormous masses of superior forces.*

On the question of the defensive layout the opinions of U.S. tactical analysts, working on Soviet post-war operational doctrine, are even more significant. They considered, for example, that the main role in the Soviet defensive system would be played by forces in the *first tactical echelon* and that, furthermore, *this echelon would be the strongest.* And because the Soviet Army at that time paid scant attention to manoeuvre and combat in operational depth, the obvious conclusion was that once the tactical echelon was broken the entire defence system would become seriously disrupted.

In short, during the period immediately following the second World War the Soviet Army was trained, organized, and equipped for hostilities on the lines of 1945. Orthodox military thought, on the 'Red Route-Blue Route' pattern, was as common in the U.S.S.R. as in the West, and tactical studies were undertaken against a background of massive air support, armoured concentrations on narrow fronts, and all the panoply and paraphernalia of large mechanized armies.

The tactical nuclear weapon stopped all that.

¹² Ely: *The Soviet Army* (Liddell Hart).

THE NUCLEAR AGE

Whilst it can be argued that too much significance is often given to the Russian tendency for 'mass tactics,' it is nevertheless true that whenever in history Russian equipment and munitions (fire power) have been insufficiently powerful when compared with the resources available to their opponent they have invariably resorted to sheer weight of numbers (manpower). Even when in 1943 their fire power became more than a match for their opponent they continued to employ manpower in mass with all their usual disregard for casualties.

In recent years, however, it has become obvious that Soviet military planners have abandoned the use of massed manpower in the light of the increased dispersion forced on both the attacker and defender by the threat of nuclear fire power. Information, as opposed to speculation, on current Soviet military teaching on nuclear war is difficult to obtain and there is every reason to suppose that they are undergoing the same period of argument, experiment, and trial as is the West. Certain indications have, however, emerged from further reorganizations within line divisions and from exercises observed in Germany. None of these indications are startling; most are common sense. They may be summarized as:—

(a) Increased decentralization and flexibility in command and battle procedures coupled with closer integration of supporting arms into small, mobile formations. (This loosening of centralized control—already commonplace in Western armies—is a major change in the Soviet philosophy of command.)

(b) Increased battlefield mobility and protection for assault formations by the introduction of A.P.Cs., amphibians, and amphibious tanks.

(c) Deployment in general over broader frontages and in greater depth to comply with the obvious need for dispersion.

The main tactical conclusion to be drawn from these indications is that manoeuvre and surprise will become the dominant principles in Soviet tactical doctrine and that the principle of mass will no longer be taught.

Any attempt, however, to dovetail the theories of Schlieffen into the highly speculative conditions of the modern nuclear battlefield would be specious and inconclusive—many of his generalizations on the economy of force in the holding role, the use of fire power in place of manpower, and the need for overwhelming offensive effort in the decisive direction are no doubt as true today on any battlefield as they were in the past. But the precepts that apply are those that will always apply—not because they owe anything in particular to Schlieffen but simply because they are military truisms.

CONCLUSIONS

In this paper an examination, albeit a superficial one, has been attempted of the growth and development of the basic Soviet military doctrines from the time of the Red Army's birth in 1918 until the advent of the tactical nuclear weapon in recent years. The influence on these doctrines of German military teaching, with especial reference to the ideas of Count von Schlieffen, has also been examined in so far as it might have affected the conduct of land operations by the Soviet Army in the Finnish and German wars.

From this study, supplemented by the opinions of many of the authors and commentators referred to in the footnotes, the following conclusions may be drawn:—

(a) The influence of German military thought was particularly strong during the formative years of the Red Army and resulted in the adoption of a number

of German strategical and tactical doctrines—principally those advocated by Clausewitz, Moltke, and, to a certain extent, von Schlieffen.

(b) The Soviet Army generally failed to apply these doctrines in practice. In particular, neither the Finnish campaign nor the opening stages of the war against Germany showed the slightest trace of von Schlieffen's strategic concepts.

(c) From Stalingrad onwards Soviet offensive operations were usually conceived as a series of encirclements and, where possible, double envelopments. This form of manoeuvre, beloved by Schlieffen, had been extolled in Soviet text books since the early days of the Red Army.

(d) Soviet encirclement operations were not conducted on the orthodox Schlieffen method of one-third holding, two-thirds striking. The necessary concentration of force on either or both flanks was invariably possible owing to enormous superiority in manpower coupled with seemingly inexhaustible reserves.

(e) An excessive preoccupation with offensive operations resulted right from the start in an almost complete ignorance of defence. The latter was neglected in all Soviet tactical teaching until comparatively recently—and is still very much a poor relation.

(f) There is no evidence that the Soviet Army's nuclear tactics are likely to conform to any specific dictum of Schlieffen. Concentration and dispersion, mobility and fire power are relative to the weapons, the transport, and the explosives employed to effect them at the time. In themselves, they are ageless. The interplay of these factors and the degree of emphasis placed on each in the light of modern conditions is more likely to be resolved by the radical methods of Soviet military planners than by any empirical approach.

As a tailpiece to these conclusions it is worth quoting a comment from Garthoff's comprehensive work on Soviet military doctrine ; one which suggests a political origin for the Soviet obsession with encirclement :—

“ The aim of encirclement and destruction of the enemy force in detail is, of course, a standard military objective. While there is not sufficient evidence to determine whether Soviet military practice is in fact distinctive in its stress on this objective, the strong Soviet verbal emphasis is very interesting in view of the significant place this manoeuvre occupies in the Bolshevik *political* doctrine and strategy. Encirclement, as a form of isolation of part of the hostile force from the main enemy centre (in both the command and geographic senses), is comparable to the political strategy of attempting to isolate potential or actual parts of the enemy coalition. Annihilation of the enemy is thus accomplished by neutralizing part of the enemy while another part is destroyed.”

The application of this strategy to Soviet foreign policy is too well known to need comment. Could it be that, after all, Stalingrad owes nothing to the Prussian aristocrat and everything to the Bolshevik Old Guard ?

THE RIDDLE OF SCHLIEFFEN

SOME COMMENTS ON CAPTAIN WYNNE'S ANALYSIS OF BRITISH TACTICAL FAILURES IN THE FIRST WORLD WAR

By LIEUT.-COLONEL A. J. WILSON, M.B.E., M.C., THE RIFLE BRIGADE

CAPTAIN WYNNE maintains that British tactics, both in attack and defence, on the Western Front in the first World War were faulty throughout. He believes this weakness to have been due to the British failure before and after 1914 properly to appreciate the way in which machine-guns were to dominate the battlefield. While the Germans adopted new methods of attack and defence to make full use of the fire power of machine-guns, the British continued to think in terms of rifle fire power.

Captain Wynne bases his case on five battles: Neuve Chapelle (March, 1915); Aubers Ridge (May, 1915); Loos (September, 1915); the Somme (July, 1916); and St. Quentin (March, 1918). The first four are instances of attacks which were unsuccessful. The fifth deals with a battle in which Captain Wynne alleges that the British attempted to copy German methods of defence but failed to do so correctly because of their inability to appreciate that the German system was based on strong counter-attack reserves being readily available. The British again, so Captain Wynne maintains, did not understand that the fire power of machine-guns meant that it was possible to hold ground with relatively few men only, the balance being thus available for counter-attack.

This article examines shortly the battles on which Captain Wynne bases his contention and attempts to determine how far his views are justified.

NEUVE CHAPELLE

Captain Wynne summarizes the battle as follows. (a) The first British offensive met an unpleasant surprise. Fifteen battalions were completely halted by three German machine-gun nests covering a frontage of 2,000 yards (the complete frontage of the attack). (b) Six German machine-gunners, almost unaided, stopped the whole offensive.

More detailed examination indicates that this analysis is somewhat superficial. The account in the 8th Division¹ history, for example, establishes the following:—

(a) The division attacked two brigades up, on the right 25 Infantry Brigade, on the left 23 Infantry Brigade. Both brigades attacked through 24 Infantry Brigade, the third infantry brigade in the division.

(b) The two attacking brigades met with very different fortunes. The attack of 25 Brigade was almost completely successful. H-hour was at 0600 hours, 10th March, and by 1050 hours 2 Rifle Brigade and 1 Royal Irish Rifles were securely established on their final objectives (including the village of Neuve Chapelle itself) and had already beaten off the first German counter-attacks. It is worth noting that these two battalions were originally the reserve battalions of 25 Brigade, the first phase of the attack having consisted of an equally successful advance by 2 Royal Berkshires and 2 Royal Lincolns. Less successful was 23 Brigade's attack, and by 0940 hours it became clear that their original assault had bogged down some 100-200 yards forward of the start line. The divisional commander (Major-

¹ 8th Division made the main effort.

General F. Davies) released his reserve brigade (24 Infantry Brigade) to tidy up the situation in this area and not, as one might have expected, to reinforce the success gained on the right by 25 Infantry Brigade.

(c) The reason given for the failure of 23 Brigade's initial attack is important. "The batteries detailed to deal with the German positions opposite 23 Brigade had come out direct from England. They had not got into position till 1200 hours on 9th March. The time left for them to look at the ground and to register their targets was thus far too short for accurate shooting, and the preliminary bombardment on this sector of front completely failed to destroy the enemy defences." Volume of artillery fire in fact proved no substitute for accuracy. By contrast, the fire plan on 25 Brigade's front was particularly accurate and effective,² a feature of it being the effective use of machine-guns on the flanks to protect the advancing infantry.

(d) As a result of the reserve brigade being committed on the left, there were no troops available to exploit the success gained on the right by 25 Brigade. The Rifle Brigade Regimental History, for example, makes it clear that a great chance was missed. "In mopping up the village a number of the enemy were killed and some 50 prisoners taken. The resistance was weak, half-hearted, indeed the resistance of men who were dazed with surprise. There was no sign of any enemy in front." Lieutenant-Colonel Stephens, the Commanding Officer, sent back to Brigade Headquarters reporting the situation and asking to be allowed to make a further advance. Permission was, however, refused until the situation on the left had been cleared up.

(e) The next day, 11th March, was a day of lost opportunities. This was largely due to a series of failures in routine staff work and an almost complete breakdown of communications within the 8th Division. There was no really effective German counter-attack till 12th March, by which time they had been able to produce the required weight of artillery to support such action.

It does not seem, therefore, that Captain Wynne's analysis of this battle is either complete or accurate, at any rate so far as the division making the main effort is concerned. Furthermore, a study of the other divisions attacking shows an equal variety of reasons for our lack of success.

The main causes of failure seem to have been, first, the inaccuracy of the artillery fire plan in support of 23 Brigade, secondly, the decision of Major-General Davies to reinforce failure and not success with his reserve brigade (see also *The Private Papers of Douglas Haig*, p. 87) and, finally, a breakdown of communications and poor liaison between 8th Division and the Indian Corps who were attacking to their south.

It is difficult to square Captain Wynne's theory that the attack was halted by three machine-guns with the fact, according to its History, that 8th Division killed

² It is interesting that General Holland, then C.R.A., 8th Division, became later Major-General Royal Artillery, Third Army, and so artillery adviser to General Allenby during the planning stages of the battle of Arras in 1917. He then advocated a relatively short accurate bombardment, doubtless remembering his sharp, successful fire plan at Neuve Chapelle. Unfortunately he was promoted to command I Corps in February, 1917, and his theories were abandoned in favour of the 'drenching' artillery policy advocated by General Birch, the Major-General Royal Artillery at General Headquarters. This fire plan was the first of any scale made by him. Perhaps this is why he did not superimpose the fire of the newly arrived batteries. Had he done so the fire plan on 23 Brigade front might have been as effective as opposite 25 Brigade.

6,000 Germans and took 2,000 prisoners in this battle. Even if the Divisional history exaggerates these figures they do not fit in with Captain Wynne's views about German defence methods.

It is, of course, true to say that 2 Middlesex, one of the attacking battalions of 23 Brigade, were 'mown down' on the enemy wire by German machine-guns. The Rifle Brigade history correctly describes them as having been literally slaughtered. This disaster was, however, due more to the failure of the artillery fire plan on the brigade front than to the tactical theories of von Schlieffen.

AUBERS RIDGE

Captain Wynne says of this battle that the British lost 9,000 in casualties before they could reach the German front trench. The offensive was stopped by about eight German machine-gunners.

This was undoubtedly a disastrous battle from the British point of view. The Germans had not wasted their time during the two months since the battle of Neuve Chapelle but had greatly strengthened and, according to the Official History, reinforced their positions. For example, the regiments of 13th and 14th Divisions, holding the line opposite the attacking British, now held only 2,000 yards of front instead of 3,000 as at the time of Neuve Chapelle.

The artillery support available to the British was distinctly thin in numbers of guns as well as in the quantity and quality of ammunition. There was only enough artillery ammunition for one narrow gap to be cut in the wire on the whole of the IV Corps front. The infantry of both 8th and 7th Divisions was to pass through this small 'hole.' It is no surprise, therefore, that the attack was a complete and disastrous failure, and that the infantry taking part suffered terrible casualties. Only three officers and 195 men remained of 2 Rifle Brigade, while 1 Royal Irish Rifles marched out of battle under the command of the Regimental Sergeant-Major.

Captain Wynne is right to give the German machine-guns the main credit for stopping the British attack. Many of the attackers never even reached the enemy wire, being shot down as they left their own trenches. There were, however, important other factors in this failure. In the first place the shortage of artillery ammunition played an important subsidiary part in the failure. The solitary gap in the wire led to much unnecessary bunching and made it easy for the German artillery to concentrate their defensive fire. Many of the casualties and much of the confusion were due to German artillery fire. It is also certain that the attack would never have been undertaken but for a desire to help the larger French attack farther south.

The frontage held by German regiments in this battle does not accord with Captain Wynne's theories about the Schlieffen method of defence. General Gough, in his book *The Fifth Army*, states (p. 258) that he had one man per yard of front at the time of the German attack at St. Quentin in March, 1918. The German density at the battle of Aubers Ridge must have been much the same. The Fifth Army had, however, to withstand a far greater scale of attack (by 42 divisions as opposed to six at Aubers Ridge) supported by an immensely greater weight of artillery.

The battle of Aubers Ridge does therefore to a certain extent support Captain Wynne's views. The British infantry were certainly hurled against strong defensive positions and uncut wire with totally inadequate artillery support. It is arguable,

however, that this was due less to neglect of von Schlieffen than to the following facts :—

(a) The battle of Neuve Chapelle had seemed to indicate that it was easier to break the German defence line than was actually so. Sir Douglas Haig in particular drew the wrong lessons from the March battle.

(b) Sir John French only agreed to the attack being undertaken out of a sense of mistaken loyalty to his French allies. He allowed his tactical judgment to be overcome by a disinclination to remain idle while the French farther south bore the entire burden of the offensive.

(c) The stocks of artillery ammunition available were quite inadequate to support an offensive. Far too much of the ammunition available (80 per cent. in fact) was shrapnel. Such high explosives as there were included many faulty shells and there were numerous instances of our own artillery fire dropping short in consequence. It is not surprising that this battle was the prelude to the famous articles by Colonel Repington in *The Times* severely criticizing the Government, and Kitchener in particular, for the current shell shortage.

Loos

Captain Wynne states that the German outpost screen in the front trench was mostly neutralized by a cloud of chlorine gas and that parts of the first row of machine-gun nests were penetrated by the British offensive. The second row, however, halted it. The great bulk of British casualties were once again caused by the German machine-guns.

Once again Captain Wynne's analysis of the battle seems incomplete. He does not take the following important facts into account :—

(a) After his experience at Neuve Chapelle, Aubers Ridge, and Festubert, Sir Douglas Haig was firmly of the opinion that the number of guns was insufficient to support an attack on a frontage of more than two divisions (*Official History*, 1915, Vol. II, p. 157). Six divisions were, however, to attack, and on 16th September Haig wrote to Sir William Robertson, "In my opinion under no circumstances should our forthcoming attack be launched without the aid of gas." The operation in fact stood or fell by whether or not the use of gas was successful.

(b) The use of gas was in fact only partially successful. It was more successful on the front of the 15th Scottish Division than anywhere else. Yet the 15th Scottish Divisional History sums up as follows, on p. 33, "It is questionable whether the discharge of gas was a success, even on the 15th Division front, where the wind was more favourable than it proved to be elsewhere." It is thus fair to say that the British infantry were again launched at a strong defensive position with a degree of artillery support that the Army Commander considered quite inadequate.

(c) In spite of this the operation was all but successful. By 0900 hours on 25th September the leading troops of 15th Scottish Division had captured the village of Loos itself and penetrated some 3,000 yards beyond the first line of German trenches. It is not surprising that after this brilliant and rapid advance they began to lose momentum. Had it been possible for fresh troops to be passed through that morning there seems no reason why, after a proper fire plan, the second German line about 500 yards beyond Hill 70 should not have been penetrated.

(d) Unfortunately, however, there were no reserves to hand to exploit the victory. The general reserve (the Cavalry Corps and XI Corps) were held too far

back directly under the Commander-in-Chief, Sir John French. The infantry divisions of XI Corps were not released to Sir Douglas Haig until 1320 hours on 25th September, and even then only after a harassing and tiring series of marches, and it was not until well after dark that they even crossed the original British forward defended localities. The *Official History*, p. 287 *et seq.*, gives a moving account of their subsequent misfortunes. The truth of the matter is that these divisions were thoroughly mishandled and put into the battle for the first time with an impossible task.

Captain Wynne correctly points out the heavy toll exacted by German machine-guns during this battle. It is, however, an over-simplification to ascribe the British failure at Loos wholly or even largely to the tactical design of von Schlieffen. The following causes were far more important.

(a) The unsatisfactory nature of the ground, which was singularly ill-suited to a large-scale offensive.

(b) The shortage of artillery—both guns and ammunition.

(c) The comparative failure of the gas, on which Sir Douglas Haig's plan depended.

(d) Faulty staff work and, particularly, mishandling of the reserve divisions which, if properly employed and given a reasonable introduction to battle, might have been able to achieve a decisive success in spite of the disadvantages shown in (a) to (c) above.

Captain Wynne is also inaccurate when he stresses the comparatively small number of men required to hold the German forward areas. Over 3,000 prisoners were captured during the battle, while the 15th Scottish Divisional History speaks of "the communication trenches leading from the front line back to Loos being filled with dead and dying men as a result of the accurate and intense artillery fire." On 25th September over 400 men of the 157th Regiment gave themselves up after a fierce defence of a support trench west of Hulluch. This sounds exactly like the 'blob' defence for which Captain Wynne criticizes the British. It is not hard to find other similar examples.

THE SOMME

Captain Wynne attributes the British failure to the German reliance on machine-guns and to British insistence on attacking them frontally. The comments which follow are limited to the first day of the battle, 1st July, 1916. Captain Wynne's analysis is again incomplete and he overstates a good case. For example:—

(a) A series of articles in *The Army Quarterly*, of 1924, under the title "The Other Side of the Hill," and based on German sources, make it clear that the density of troops in the German front line was quite considerable. Defence was based on a continuous trench system with a dug-out for 25 men every 50 yards. It is true that this figure, giving a density of one man for every two yards of front, is less than the figure regarded as necessary by the British at this time. Nevertheless, requiring as it does a company or thereabouts for every 150 yards of front, if any depth is to be provided, it is a density far greater than the British would have considered possible at any stage in the second World War.

(b) The effect of the prolonged bombardment had been greatly over-estimated and the recuperative power of the German defenders was not appreciated. This accounts for the slow pace of the advance, which allowed the Germans to get into

position again after the bombardment came to an end. By contrast, on the front of German 99th Infantry Regiment where the 36th (Ulster) Division was the attacking formation, the situation was quite different. Here the attacking British followed the barrage closely and overran the German position before the machine-gunners had time to come up from their dug-outs.

(c) Reserves were again used to redeem failure and not to reinforce success. In X Corps, for example, General Morland, the Corps Commander, used his reserve to support 32nd Division whose attack had failed completely, in spite of the reserve Divisional Commander (General Perceval, 49th Division) asking for permission to exploit the success gained by the victorious 36th Division.

Nevertheless, the comparatively small total of German prisoners taken at the end of the first day's fighting, some 2,000 only, is evidence in support of Captain Wynne's theory. The *Official History* (pp. 484-492) clearly admits the weaknesses in British training and the lack of foresight shown in planning the attack.

The main reasons for the failure to break through on 1st July, 1916, seem to have been :

- (a) Lack of experience on the part of higher commanders and staffs.
- (b) Weak and unsound training of many of the formations taking part.
- (c) A wasteful and apparently unmethodical use of the artillery ammunition available, coupled with an inflexible fire plan almost impossible to alter after H-hour.
- (d) In the words of the *Official History*, "it was the machine-gun above all, favoured by the thickness and lack of elasticity of the British line formation, the slowness of the advance . . . , which broke the assault on the 1st July."

Analysis of this battle does therefore to a certain extent support Captain Wynne, though, as indicated above, there were other reasons as well for the British failure.

ST. QUENTIN

Captain Wynne maintains that the British failure to halt the German offensive of March, 1918, was due to their misinterpretation of the German theory of defence. He alleges that the British defence system was based on two rows of defended localities with an intermediate row of machine-guns. These were given no special protection to satisfy the German instruction that they were the backbone of the defence. Whereas the German system of defence deployed one-third of its manpower and retained two-thirds for counter-attack into the Outpost Zone, the British put all their manpower in the Forward Zone. It was a rigid defence without a counter-attack reserve. The comments which follow deal generally with the system of defence adopted in the Fifth Army.

Once again, Captain Wynne's analysis of the battle is incomplete. He does not, for example, take into account the following important factors :

- (a) Fifth Army had only recently taken over their sector from the French, the relief being finally completed on 30th January, 1918. The positions were not originally designed in depth, most of the French effort having been spent on the Forward Zone. Fifth Army thus had only some six weeks to reorganize the defence system along the new lines. In the case of some divisions this time was even shorter. 18th Division, for example, only took over their sector at the beginning of March. This short time to prepare the position compares unfavourably with the German defences on the Somme in 1916 where the defenders had been uninterruptedly in position for 18 months.

In addition the sector had for a long time been a 'quiet' one, and the French had consequently paid little attention to developing the defences.

(b) The frontages held by Fifth Army were very wide. III Corps, with all its three divisions in line, held a frontage of 31,000 yards (*Official History*, 1918, Vol. I, p. 127). Fifth Army as a whole had 11 divisions in line for a frontage of 42 miles.

(c) The effect of such wide frontages at battalion level is well described in 18th Division History, p. 258. "The Forward Zone held by 7 Buffs was typical of the other Forward Zones occupied by battalions of the Division. The frontage was 5,500 yards, a very extended front for two companies disposed in depth to occupy. The system of defence adopted was that of platoons disposed in depth occupying portions of the old French trenches or in the ruins of Vendevill village. In rear of these two companies was a support company disposed across the whole battalion front, and a reserve company of which two and one-half platoons were available as battalion reserve." The frontage held by this battalion was very nearly three times that held by the German regiment holding Aubers Ridge in 1915.

(d) Early in 1918 shortage of manpower had caused a reorganization within all divisions and brigades of the British. 36th Ulster Division History, p. 184, describes the effect of the changes. "For the moment—a fleeting moment, indeed—the enemy had second place in the minds of officers and men of the Division. Its first concern was with its reorganization. The shortage of manpower had been talked of long enough. Its fruits had now to be plucked, and bitter they were. The whole British Army was now cutting down its divisions to nine infantry battalions, and its brigades to three. From the tactical point of view, apart from the fact that it entailed a loss of some 175 battalions, the change had serious inconveniences. The brigade of four battalions was the traditional British formation, just as the regiment of three was the Continental. It was the formation which British commanders had handled in training and practice, upon which their conceptions of infantry in war were based. The moral loss was no less great, particularly in divisions and brigades with strong territorial associations and sentiment. It meant that battalions in every division disappeared, and that either their personnel was transferred to others, or that they became 'entrenching battalions,' pitiful, nameless ghosts, robbed of their pride and their traditions. Such changes could not be without their effect upon morale, working through the loss of *esprit de corps*, the very life's blood of a combatant unit."

(e) While it is true that lack of time and labour prevented machine-guns always being given the special cover that would have been desirable, proper protection was provided whenever possible. On VI Corps front, for example, astride Bullecourt, 14 machine-gun posts were sited in the Forward Zone along a frontage of 7,000 yards. Of these, five were sufficiently well dug in to be proof against a direct hit from a 5.9-in. howitzer. This density of machine-guns in the front line (one every 500 yards) conflicts with Captain Wynne's statement that the British failed to copy the German system of siting machine guns in the front line to fire frontally.

(f) Captain Wynne also states that the British deployed all their manpower in the Outpost Zone. Detailed investigation does not suggest that this was generally so. Fifth Army in fact had 36 battalions in the Forward Zone, 43 in the Battle Zone, and 29 behind either (*Official History*, 1918, Vol. I, p. 130).

The German tactics for the St. Quentin attack were extremely well thought out. The following were particularly important features:—

(a) The greatest care was taken to keep secret the exact area where the blow was to fall.

(b) Not only the troops, but the divisional generals and staffs also were given special courses of training.

(c) The attack was to be supported by a short bombardment—five hours only—but of unprecedented intensity. In order to help surprise there was no previous registration opposite Fifth Army.

(d) Finally the infantry were clearly warned that the bombardment would do no more than compel the enemy to take cover. It would be of value only if the infantry accepted the opportunity "by keeping close behind the barrage regardless of splinters."

(e) The German attack tactics were undoubtedly greatly helped by the thick mist which lasted till noon. In the words of the 18th Divisional History, p. 260, "In the mist, which lasted till noon, Colonel Minet's [the C.O. of the divisional machine-gun battalion] specially arranged machine-gun cross fire proved of no avail."

(f) In the event, apart from their infiltration methods helped by the mist, there was nothing particularly subtle about the German infantry tactics. In the 9th Division History, on p. 262, is described an attack on the South Africans, "Prodigal of life, the pursuing Germans charged in mass at 50 yards' range, and whole sections were shot down by the vengeful fire of the South Africans." Again, on p. 267, "The Germans advanced in dense formations until broken up in confusion by heavy fire from the South Africans." It does not sound so different, except in the speed of advance, from a British attack.

Captain Wynne's analysis on the battle of St. Quentin, based as it is on the false premise that the British deployed all their manpower into the Forward Zone, seems both incomplete and inaccurate. The true reasons for the German success seem to have been :—

(a) The wide frontages held by some British formations and the poor state of the defences taken over from the French.

(b) The adverse effects of the recent reorganization of the British Army divisions both on morale and training.

(c) The high state of special training reached by the German assault divisions, shown particularly in the speed with which they advanced and followed the barrage. They had also been trained in infiltration tactics and were quick to exploit 'soft spots.'

(d) The well-planned and exceptionally heavy German bombardment—the first fire plan to have developed fully the lessons of General Holland's successful fire plan at Neuve Chapelle.

(e) The effect of the mist, which handicapped the British machine-gunners till noon each day.

GENERAL SUMMARY

Study of the five battles on which Captain Wynne has based his argument suggests that, for an attack to be successful in the first World War, the following conditions were required :—

(a) Specially trained troops, commanders, and staffs.

(b) Surprise, at least as regards either the timing or place of an attack.

(c) An adequate and accurate bombardment, intensity and accuracy being more important than duration.

(d) Some system for dealing with the defenders' wire. After Cambrai, in November, 1917, this problem was solved by the large-scale use of tanks.

(e) Adequate reserves, properly positioned, used to exploit success and not to redeem failure.

If the above conditions were present it was possible to defeat the defensive barrier imposed by the machine-gun sited in depth. Where these principles were not observed attacks withered and died, however gallant and determined the assaulting infantry.

It is understandable that it should have been the Germans at St. Quentin in March, 1918, who first achieved a breakthrough, for their numbers of trained professional commanders and staff officers were far greater than the British. The large pre-war German Army had given far more opportunity to its senior officers to command on a large scale. Some idea of the speed of expansion of the British Army from 1915-18 is given by the fact that Lieut.-Colonel Stephens, who commanded the Rifle Brigade at Neuve Chapelle in 1915, was a Corps Commander by 1918. It is no surprise, therefore, that the British commanders in 1916 and 1917 lacked experience in planning and controlling offensive operations, and sometimes drew false conclusions from previous battles.

CONCLUSION

It thus seems that Captain Wynne's views on British tactics in the attacks in the first World War are only partially justified. In the battles on which he bases his case there were in every case circumstances other than the fire power of machine-guns which powerfully influenced events. While the machine-gun often dominated the battlefield, it need not necessarily have done so had the standard of planning, commanding, and training been higher.

It also appears that Captain Wynne's analysis of the British tactics in defence in 1918 is incomplete. It does not seem that the British in fact misapplied the German defensive methods of 1916 and 1917. The breakthrough at St. Quentin was due to the variety of circumstances given in this paper and was not the consequence of neglect or misunderstanding by the British of the German theory of defence.

THE HEEL OF ACHILLES

By COMMANDER F. BARLEY, R.N.V.R., and LIEUT.-COMMANDER D. W. WATERS,
F.R.Hist.S., R.N.

IN his lecture of October, 1957, Commander Sir Stephen King-Hall postulated an alternative to the nuclear deterrent.¹ He suggested "that the United Kingdom should make a unilateral declaration that it will make no use of nuclear energy for military purposes" and that, as "we should not be in a position to resist successfully by force any demand made to us by a power which had retained nuclear energy for military purposes," the nation should be organized "for non-violent resistance in the event of an occupation." His assumption is, it appears, that if the thought processes of the Western Powers continue to flow along their accustomed military channels mutual incineration in the event of war involving the use of nuclear weapons becomes inevitable.

This thesis has prompted the authors to consider another alternative which has become overshadowed by the towering threat of nuclear land bombardment. This is the possibility of the Communist Powers attempting to achieve their aims by an attack on the 'Achilles' heel' of the 'Imperialist' states, namely, their merchant ships at sea; a form of attack which, curiously enough in the light of the declared inadequacies of our naval and air forces to protect our ships,² the Prime Minister has not included in his definition of 'a major attack.'

The authors believe, with Mr. Michael Howard, that "the ideology of a country is part of the superstructure of its economic way of life," that "nothing would be easier than for the Russians to bring us to their feet by blockading us"; and that, if they did effectively blockade us, our way of life would indeed vanish "as the way of life of all past civilizations."³ Moreover, the authors also believe that the Russians could effectively blockade us without indulging in the nuclear bombardment of this country. They believe that the Russians could do this simply by controlling at sea the movements of the ships serving and sustaining the civilization—the way of life—of this country and of the free world, and thus without incinerating the human minds they wish not to destroy but to control.

This is the crucial point, namely, that the way of life, and thus of thinking (in so far as it is determined by economic factors) of this country and of the free world and of the uncommitted nations can be changed by the use of force at sea directed only against our ships at sea.

In the authors' view the object of war, if not one of annihilation, is indeed to *change the enemy's mind*, and in their opinion it is still a golden rule that in this process no more force should be used than is necessary. Indeed, because of the tremendous and indiscriminate destructiveness of nuclear weapons in populous areas, they believe that a one-sided war of annihilation is no longer practicable and that, in consequence, to use no more force than is necessary to change an enemy's mind

¹ "The alternative to the Nuclear Deterrent; Non-violent Resistance," this JOURNAL, February, 1958, pp. 4-20.

² *The Times*, 28th September, 1957, Report of Press Conference with Admiral Sir John Eccles, C.-in-C., H.F., and Air Marshal Sir Bryan Reynolds, C.-in-C., Coastal Command; *The Times*, 30th September, 1957, Report of Press Conference with Admiral Gerauld Wright, SACLant.

³ This JOURNAL, February, 1958, p. 17.

is now the one and only sane rule—a realistic view which we find, indeed, implemented in the recent Korean conflict by all the belligerents.

The Soviets are well aware that shipping is the Achilles' heel of the 'Imperialist' states. In 1957 Rear-Admiral Andreev of the Russian Navy was quoted as writing, "the essence of the matter is that for the imperialist states the very possibility of conducting war depends upon the support of uninterrupted operation of sea and ocean communications,"⁴ an observation which gives point to Marshal Zhukov's statement to the Twentieth Communist Party Congress, in February, 1956, that, "in a future war the struggle at sea will be of immeasurably greater importance than it was in the last war."

Transportation is civilization and, in so far as the 'Imperialist' states are concerned, civilization is ships. For instance, this country imports annually 100,000,000 tons of goods, more than 99.5 per cent. of them in ships. Ships, in the words of that great statesman, Halifax the Trimmer, are "indispensably necessary to our very being."⁵ These words, as true of the United Kingdom in the 20th as in the 17th century, are today no less true of the whole free world. They are at once the explanation of and the justification for the 500 Soviet submarines and the 3,500 Soviet maritime aircraft.

"The need to use the oceans," stressed Admiral Arleigh A. Burke, United States Chief of Naval Operations, addressing the English Speaking Union in April, 1957, "is greater than ever before. The tonnage of material moved by sea continues to increase year after year. Over 99½ per cent. of the total world volume of trade moves by sea. Less than one-half of one per cent. moves by air. Survival under attack depends on the ability of the free world to come quickly to the support of beleaguered nations by sea . . . these can be no free world unless we do."

All these facts, it will be recalled, are mirrored without any doctrinal distortion in the minds of Soviet naval thinkers and in the measures the Soviet naval planners take.

Nor are the ships of the world so numerous that their destruction, or at least the destruction of a crippling number of them, in a comparatively short time is not a practicable operation for forces of the magnitude of those already created by the Soviets. In the second World War, fighting with only conventional weapons, the belligerents between them sank some 9,000 sea-going ships.⁶ Today, the merchant navies of the world total some 33,750 ships of 110,000,000 gross tons; however, 18,250 of these ships aggregate only 8,000,000 gross tons so that 15,500, less than half of the world's ships, make up 92.5 per cent. of the world's carrying capacity. The

⁴ Garthoff, R. L., "Sea Power in Soviet Strategy," *United States Naval Institute Proceedings*, February, 1958, pp. 85-93.

⁵ Halifax (1694), *Rough Draught of a New Model at Sea*.

⁶ *Second World War Shipping Losses*.

| | | | | | Approx. Nos. of Ships, 500 G.R.T., and above, sunk |
|------------------------------|-----|-----|-----|-----|--|
| British, Allied, and neutral | ... | ... | ... | ... | 4,800 |
| German | ... | ... | ... | ... | 940 |
| Italian | ... | ... | ... | ... | 450 |
| Japanese | ... | ... | ... | ... | 2,950 |
| Total | ... | ... | ... | ... | 9,140 |

break-up of the free world's civilization can therefore be effected by the destruction of only a few thousand ships—by no means of all the sea-going ships even—or by the paralysis of their movements—by no means everywhere at once, nor permanently. These facts also are, of course, well-known to the Soviets, although whether they are appreciated as acutely by the peoples and statesmen of the free world is at times a matter of considerable doubt (vide, Cmnd. 124, *Defence—Outline of Future Policy*, April, 1957, "the role of naval forces in total war is somewhat uncertain").

This dubiousness of an island people about the role of naval forces must be a matter of some gratified surprise to the Soviet planners when they recollect (as undoubtedly they constantly do) that as recently as 1945, at the time of the flying-bomb and V.2 rocket attack, the First Lord of the Admiralty reminded the House of Commons that; "... It is highly significant that, after the trouncing which the U-boats suffered in 1943, he [the enemy] should consider it worth while to continue to devote so large a part of his resources to this form of warfare. This shows that he still considers it to be his best hope of averting defeat against a nation which lives by sea-borne supplies. This is a highly important fact which will, I trust, never be forgotten by future First Lords, future Boards of Admiralty, or future Governments, or by the people of this country. . . ."; and that Sir Winston Churchill, a man not easily frightened, has categorically declared that, of all the diverse attempts of the enemy to defeat the Allies, "The only thing that ever really frightened me was the U-boat peril";⁷ and that the Chief of Staff, United States Army, not by nature a fearful man, wrote to the United States Chief of Naval Operations, on 19th June, 1942, "The losses by submarines off our Atlantic seaboard and in the Caribbean now threaten our entire war effort. . . . I am fearful that another month or two of this will so cripple our means of transport that we will be unable to bring sufficient men and planes to bear against the enemy in critical theatres to exercise a determining influence on the war. . . ."⁸

If we ask ourselves, "What is the object of the Communist Powers?" and we frankly admit that it is to change our way of thinking into theirs, and if, as frankly, we admit that the object of the free world is to guide the uncommitted nations and to change the ways of thinking of the Communist Powers into ours, we must also admit that neither the Communists nor the free world will achieve their object by indulging in mutual destruction, for what is inanimate is without mind. It follows therefore that each side must attempt to influence and, let us be honest, in varying degrees to control the way of life of the peoples of the world without incinerating their minds in the process.

The Soviets can attempt this by a sea blockade, that is, by sinking ships at sea, or, by threat of attack, by preventing them from passing on the seas upon their lawful occasions. If attempted, this blockade must be broken by means that will not involve the peoples of the free world in a nuclear exchange.

Now a blockade can be broken by making the task of the blockading forces so difficult, or so costly, or so unrewarding that the blockader, seeing no prospect of final success crowning his efforts, reaches a point where he experiences a change of mind and is prepared to come to terms with the beleaguered. He may not have achieved all that he hoped to, but he is prepared to rest content, at least for the time, with the situation as it stands. The Berlin blockade is a case in point.

⁷ Churchill, W. S. (1949), *Their Finest Hour*, p. 529.

⁸ Morison, S. E. (1948), *The Battle of the Atlantic*, p. 309.

In the past maritime blockading forces have always been deterred most effectually and most economically by maritime forces operating at sea, and there are many grounds for believing that in this respect the future will be no different from the past. However, it may be that by some miscalculation or mischance either a sea blockade will be attempted concurrently with a nuclear land bombardment or, if the sea blockade alone is initiated, an attempt will be made by the Allies to break it by nuclear land bombardment. Either bombardment will provoke retaliatory nuclear land bombardment. When the smoking fury of this cataclysmic exchange shall have subsided the residue of the free nations will be no less dependent than before upon the safe carriage of supplies and of men across the oceans, but still in the face of numerous hostile submarines and aircraft. Thus, whether the sea blockade be attempted (and defeated) without a nuclear exchange bombardment (as is rational) or as a part of an irrational nuclear exchange, the maritime problem is unchanged. The sea blockade must still be broken, as rapidly, economically, and efficiently as practicable, and with the available maritime forces alone.

Perhaps it was with these possibilities in mind that Admiral Arleigh A. Burke declared, on the occasion already referred to; "Human liberty and national independence seem to bear some kind of relationship to an understanding of the sea. . . . Today, when the ocean spaces clearly hold the key to the future, the free world continues to look to England's deep, historical knowledge of the sea for inspiration and guidance. . . .⁹ Our greatest danger as free peoples lies in the failure to recognize our oceanic opportunities."

The present age is popularly spoken of as witnessing a revolution in weapon development, and it is frequently asserted that this technological revolution involves revolutionary changes in the manner of using weapons. But the word revolution connotes not only 'violent change,' as in the constitution of a government, but also 'motion returning to the same point or state.' These new weapons are as expensive as they are destructive and, as a consequence, at least to the 'Imperialist' states, they are provided in only relatively small numbers as compared to the provision of armaments earlier in the century. As a further consequence the number of conventional weapons, and of vehicles for mounting all the various weapons, has also been reduced. At the same time the speed at which vehicles can move, and with which missiles can be delivered, has been increased. Thus the available missiles, as well as being fewer, can be expended more rapidly than heretofore. Because of this, unprecedented care is needed to ensure that they will always be used to achieve against threatening enemy forces their highest deterrent or destructive effect, that is to say, that they will be expended only at the right place and at the right time. This involves, to use (though in a different sense) Commander Sir Stephen King-Hall's trenchant phrase, 'breaking through the thought-barrier' which has established certain conventional ideas about operations of war. It involves the adoption of a more rational and more scientific attitude to war's problems, both in discussion of them and in planning to solve them, than adopted hitherto. The essential difference is a quantitative instead of the predominantly qualitative approach to operational problems. Instead of discussing operations in the abstract terms of 'offensiveness' and 'defensiveness,' for instance, the essential criterion must be efficiency. This is because efficiency can be measured but offensiveness cannot. Efficiency in operations at sea can be measured, for example, in terms of U-boats destroyed per flying or steaming hours by aircraft or by ships engaged on various types of operations, as for

⁹ The White Paper on Defence (1957), had not then been published.

instance, patrolling in search of U-boats on passage, hunting in search of U-boats in operational areas, or escorting ships in convoy. Thus because efficiency has to be measured, the quantitative effort expended on the various operations has to be measured. One consequence of this is that instead of discussing problems of sea warfare in abstract and general terms, such as 'to defend Atlantic communications,' planners are obliged to discuss and to formulate their problems in concrete terms of ships, aircraft, submarines, and their numbers, performance, and particular movements—probable or intended. Thus, sooner or later, the planners clarify their problem by reducing it to its fundamental elements. It is then seen to be one of how, when, and where a given number of merchant ships, warships, and aircraft, of specific performance, are to be used and for what specific purposes. Whether the operations involved are called 'offensive' or 'defensive' is then seen to be irrelevant and, indeed, obfuscating for what, in fact, concerns the planners is whether the operations planned are likely to be efficient. One measure of the success, or failure, of these measures will be the shipping loss rates, the percentages of ships sunk by the enemy of those sailed. These statistics do not lie.

Thus, using concrete terms, it is possible to define with clarity the object of the Soviet maritime forces. It is, in the event of war, to prevent us from using our ships how, when, and where we want to and, if we sail them, to sink them. Conversely, our own task is equally clear. It is to be able to use our own ships how, when, and where we want to. Thus, far from "the role of naval forces being somewhat uncertain," it has never been more certain.

The merchant ships will be threatened by submarine, surface ships, and aircraft, all capable if they encounter the ships unopposed of sinking them with a variety of weapons. Thus, our ability to use ships will depend upon the ability of our available maritime forces to oppose the enemy forces on terms so tactically advantageous that they will everywhere be deterred. The sooner that our forces can do this the sooner will the enemy desist from his attempts. There is nothing revolutionary, in the sense of 'violent change,' in this. It has been the justification for naval forces since ships first sailed the seas. What, however, is new about the definition of the maritime task is that it enables the problem to be expressed in realistic terms, and quantitatively. The importance of this is paramount; it is so because it makes rational prediction of the scale and scope of the maritime problem practicable. It thus provides a rational basis for planning, and until planning is done on this basis, instead of on what Professor P. M. S. Blackett has termed 'emotional thinking,' prediction is a matter of mere guesswork.

When the maritime problem is thus reduced to a calculable basis in terms of ships a number of important matters become clarified. For instance, it becomes clear that the practical problem is not to gain command of the sea, to 'command (say) the Atlantic' everywhere and at all times, but to command only those portions of it where at any given time we actually have ships. The strategy of the Atlantic war then becomes coherent. For us it resolves itself into determining where *we* propose to have ships; and our operational problem is so to control their movements that the enemy is forced always to encounter superior tactical concentrations of our forces if he should attempt to stop our ships from sailing, or to sink them if they have sailed.

It also becomes clear that the means employed are not abstractions—'sea power' and 'air power'—but tangible entities; ships, submarines, and aircraft, of determinate numbers, determinate mobility, and determinate fighting power, and that their positions and movements are planned to execute efficiently specific operational

tasks in the light of this knowledge and of the intelligence of probable enemy forces, intentions, dispositions, and capabilities. Whether the appropriate operations can be discharged with the requisite degree of efficiency by one Commander-in-Chief of one Service directing the ship based aircraft and shore-based ships and submarines, and another Commander-in-Chief of another Service directing the shore-based aircraft, is a cause for some misgiving. History is not reassuring on this point.

The enemy, as already stated, will use submarine, surface ship, and aircraft to attack our ships, yet the Defence White Papers of both 1957 and 1958 give little consideration to the problem of aircraft attacks on our ships at sea. The Russians have a prodigious maritime air fleet, estimated at some 3,500 machines, many of very considerable range and speed, and armed, or shortly to be armed, with long-range stand-off weapons.

In the second World War the German maritime aircraft, ill-equipped, initially ill-trained, and always relatively few in numbers, achieved, even when armed with short-range weapons, significant success in attacking allied merchant and war ships operating in the absence of fighter aircraft, or in the presence of fighter aircraft not under the warships' tactical control. Indeed, it was lack of ship-borne fighters which crippled British military operations so desperately until the end of 1942, and which threatened to lead to military disaster in the Western Desert in 1941 and 1942, for it was lack of such aircraft, not the threat of U-boat attack, which caused the Mediterranean to be closed to allied shipping until 1943. On the one hand the fleet, for want of them, was unable to operate where it could sink sufficient of the Axis supply ships to prevent the build-up and maintenance of the Axis armies in the Western Desert; on the other hand the want of them, because all troop and supply ships for the Middle East had to be sailed round the Cape of Good Hope to avoid air attack, trebled the time taken to build up our own armies.

When armed with short-range stand-off weapons, the very few German aircraft so equipped in 1943 achieved a high degree of success against British warships operating in the Bay of Biscay in the absence of supporting fighter aircraft, and against allied warships in the Mediterranean similarly devoid of fighter cover or in the presence of fighter aircraft not under the ships' tactical control. It is notable that the German shore-based fighter aircraft which successfully defended the *Scharnhorst*, *Gneisenau*, and *Prinz Eugen* against all air attacks throughout their Channel dash of February, 1942, were under the tactical control of the ships.

In the Pacific theatre the lesson was no less clear and no less poignant. It is sufficient to name the *Dorsetshire* and *Cornwall* as representative of ships sunk in the absence of fighter aircraft, and the *Prince of Wales*, *Repulse*, and *Hermes* as representative of losses incurred within range of fighter aircraft not under the tactical control of the ships attacked.

Today guided missiles are progressively displacing manned fighter aircraft. The ability of warships to operate at sea within range of hostile aircraft is becoming increasingly dependent upon the number of ships provided with missiles as well as upon the numbers provided with fighters for destroying aircraft or deterring them from attack. The smaller the number of each provided, and the larger the number and the wider the distribution of hostile aircraft, the more limited will be the mobility of the various surface and air units of our fleet. In short, the number of merchant ships that we can use at any one time where air attack is probable—much of the North Atlantic—will be determined by the number of the warships, armed with fighters and surface-to-air guided missiles, available to defeat aircraft attempting to

attack them. The recent Defence White Paper gives no assurance that this fact and its implications have been grasped by the Government, a conclusion which the recent observations of the late Commander-in-Chief, Home Fleet, and of SACLant indubitably bear out.

* * *

It has been postulated that the Russians might attempt to impose their will on the peoples of this country by a sea blockade alone. Is there any recent historical analogy which suggests that, if they attempted to do so, they might well succeed, or that, in the event of a mutually destructive nuclear exchange on land targets, the issue of the war would be settled at sea by the outcome of the subsequent sea blockade?

This leads to brief consideration of the one theatre of war where atomic missiles have been used, where fire-bombing on a large scale against highly inflammable cities simulated closely the fire and blast effects of atomic explosions, and concerning which detailed quantitative reports of the effects of such attacks have been published and are available.

Probably the most important and least known fact about the Japanese war of 1941-45 is that Japan was not defeated by the dropping of atomic missiles, actual or threatened, nor by the effects of mass destruction of cities by bombing, nor by the destruction of several armies, nor by the destruction of her fleet, nor by the certainty of ultimate invasion, but by the destruction and immobilization, through the high probability of destruction, of her merchant shipping by a small force of submarines and a very small proportion of Allied aircraft deployed in the Pacific. The defeat of Japan was indeed accompanied by a prodigality of operational effort which arouses a sense of profound admiration for the energy, originality, and devotion to duty exhibited; nevertheless, let it be repeated, Japan was defeated primarily by a sea blockade; and moreover by a sea blockade which was considered of such minor importance as to merit the acquisition of no advanced bases for the specific purpose of intensifying it and the expenditure of less than 5 per cent. of the U.S. naval and air effort in the Pacific theatre.¹⁰ To this country in particular, but also to all the sea-divided ship-knit countries of the free world, this fact should be of the utmost significance.

Like the peoples of the United Kingdom, the way of life of the Japanese and their ability to wage war were entirely dependent upon a copious flow of ship-borne supplies. Yet Japan started the war in December, 1941, with a merchant fleet totalling 6,000,000 gross tons, even then insufficient for the maintenance of her peace-time level of economy. By April, 1945, the Japanese merchant fleet grossed barely 1,000,000 tons. All oil and raw material imports had ceased; her armies were isolated and without the means of supply; the few ships that could move were confined almost entirely to bringing in from nearby Korea a trickle of desperately needed cereals and salt. Within a month, by May, 1945, the Supreme War Guidance Council of Japan had taken the bitter decision to seek ways and means to terminate the war.¹¹ Thus, weeks before the great fire raids on the cities of Japan, and months before Hiroshima and Nagasaki, Japan was beaten and moribund. The basis of her economy had been shorn away and no alternative to slow starvation and to increasing

¹⁰ United States Strategic Bombing Survey (1947), *The War Against Japanese Transportation, 1941-1945*. Washington, 1947.

¹¹ United States Strategic Bombing Survey: *The Effects of Atomic Bombs on Hiroshima and Nagasaki*. (August, 1945). Washington, 1946.

impotence remained. In effect, the fire bombing of the Japanese cities and the atomising of Hiroshima and Nagasaki were the mutilation of a corpse before *rigor mortis* had set in, while overseas, like fruit from the severed branches of a stricken tree, the armies of Imperial Japan lay scattered rotting on the ground.

In the course of this blockade submarines had inflicted one-half of the shipping casualties and aircraft the other. The number of United States submarines, initially 50, never exceeded 150; and the air effort expended involved a mere 4.5 per cent. of the U.S. air sorties in the Pacific. These facts, also, are surely not without significance to an island people when seen against the sombre backcloth of 500 Soviet submarines and 3,500 Soviet maritime aircraft.

It is true that the Japanese had scientifically designed ships, aircraft, and weapons, but they had not studied the operational problems of maritime warfare scientifically. Yet study of maritime wars reveals unequivocally that, to achieve success, method, if not more important, is no less important than means.

To study, and still more, to plan maritime operations scientifically is an arduous and exacting discipline. It involves a detailed knowledge of numerous facts and figures, and the ability to synthesise them into a coherent whole so that an intelligible pattern of rational activity, of cause and effect, is woven. This rational and unromantic discipline has its reward. It reduces maritime operational problems to ones of calculable probabilities so that it is possible to elucidate principles governing the efficient deployment of maritime forces and the efficient employment of merchant ships under war conditions.

In each of the last two world wars the enemy sea blockade of the Allies has been broken only by adopting a scientific system of warfare. This system is known as the convoy system. The sooner it has been adopted, and the more thoroughly it has been implemented, the sooner and the more completely has the blockade been broken. Clearly, two interrelated problems are involved, one mercantile, the other naval, the solutions to each of which must be mutually reconcilable. The mercantile process entails that the civil authorities plan and control the selection, loading, and discharging of all cargoes and of all ships used to carry them; while to the naval authorities falls the planning and control of the sailing and sea passage of every merchant ship used and the disposition and movements of the available warships and aircraft, so as to ensure that the enemy shall encounter the ships sailed, if at all, only in the face of superior forces.

Clearly, resolution of this two-fold problem with its mercantile and operational requirements necessitates a scientific approach. Take, for example, the problem of supplying the United Kingdom. At present ships bring into the United Kingdom about 100,000,000 tons of cargoes a year. This immense flow of imports involves about 63,000 sailings each year to the United Kingdom from overseas ports, of which about 15,000 involve ocean voyages. That is to say, about 1,250 ocean-going ships arrive and discharge their cargoes in United Kingdom each month. The basic problem of survival in time of war, assuming adequate discharging and port clearing facilities, resolves itself into one of determining, in the light of the probable enemy threat, what percentage of these imports is likely to be brought in by the ships likely to be available. This will depend upon the ability of the available maritime forces to ensure the safe passage of any ships sailed. Thus the number of ships that can be sailed at any given time, how often they can be sailed, and between what ports, will depend upon the number, armament, and performance, in a word upon the efficiency, of the maritime forces available to escort them safely wherever and whenever they

will be under risk of attack. If this efficiency be low because of lack of numbers, or of inferior armament or performance, or of misdirection of effort, the imports will be low. The lower the imports the lower will be the fighting efficiency of the nation, and the sooner will the sea blockade compel it to treat with the enemy on unfavourable terms.

With the development of long-range weapons, flying-bombs, rockets, and ballistic missiles—and particularly of those fitted with nuclear warheads—the problem of importing a sufficiency of cargoes into this country has been complicated. If a nuclear land bombardment takes place, a substantial proportion of the populace—perhaps a third—will have been killed; consequently, the import requirements will have been substantially reduced. Furthermore, the ship-discharging and port clearance facilities also will probably have been drastically reduced, both in number and variety. To some extent provision against the crippling effects of such a limitation upon the country can be made by accumulating strategic reserves of vital commodities.

For an island people whose national policy is to reduce their maritime forces, strategic reserves are doubly necessary, for a reduction in the maritime forces inevitably entails a reduction in the number of ships they can safeguard at sea at any given time against a given risk of attack. Thus, even should a nuclear bombardment not devastate the docks and inland distribution services, a strategic reserve is necessary to eke out the reduced and otherwise inadequate volume of imports that is the inevitable concomitant of inadequate maritime forces. On this measure the recent White Papers on Defence have not been reassuring. Conversely, the smaller the strategic reserves, the greater is the need for maritime forces sufficient to ensure the safe passage of every ship sailed.

But the need is not only for maritime forces in the generally accepted sense of the term. Forces are needed to defeat air attacks on ships in coastal waters no less than in oceanic, and this task is properly the business of shore-based fighter aircraft and of ground-to-air guided missiles. No provision, each of the last two White Papers on Defence makes clear, is contemplated for such forces. "Fighter Command now has the more limited task of protecting the bomber bases."¹² The present-day fighter and ground-to-air guided missile system being created in the U.K. is analagous to the fighter defence system created prior to 1939. On the eve of the second World War, in 1939, this system had hastily to be reorganized because, up till then, it had left ships at sea in coastal waters at the mercy of every marauding aircraft.¹³

In discussing the efficient use of merchant ships in time of war in order to maintain the United Kingdom in the face of a sea blockade, and whether the latter involves a nuclear exchange bombardment or not, certain assumptions must be made about the availability of merchant ships. It will be assumed that a mutually destructive nuclear exchange land bombardment occurs, and that as a result it will be practicable initially to turn round monthly in U.K. ports only one-third of the peace-time number of ships, say 400. It will also be assumed that this number can be loaded overseas monthly to supply the United Kingdom, and that the nuclear exchange has left the opposing maritime forces depleted to a limited extent—destruction having been avoided by the forces of both sides having been dispersed outside the main target areas.

If 400 ships arrive monthly, and if they average 5,000 tons of cargo apiece, they will import 2,000,000 tons of cargo a month, or about one-quarter of the peace-time

¹² Cmnd. 363, *Defence* (1958), para. 33.

¹³ Richards, D. (1953), *Royal Air Force, 1939-1945*, Vol. I, p. 62 *et seq.*

imports.¹⁴ Clearly it will be of the utmost importance to defeat the threatening enemy maritime forces as rapidly and as decisively as possible in order to ensure that as few as possible of the 400 ships sailed monthly are lost *en voyage*. If they are, the volume of imports that it will be practicable to handle will not be received. In short, merchant ships and their crews can in no circumstances be regarded as expendable as at times they have been in the past.¹⁵

Today high-speed submarines, firing high-speed long-range torpedoes, can sink a ship from a distance of some miles; consequently a submarine must be defeated several miles from a merchant ship. Because of her superior speed the submarine can attack from any point on what, for simplicity, can be considered as the perimeter of a circle centred on the ship she is attacking. Obviously the escort to a ship must be stationed on or outside this perimeter. As the detection and attack ranges, and the mobility of the escorts, is usually less than that of a submarine, more than one escort will be needed in order to defeat a submarine before she can sink a ship. Sufficient escorts, in fact, will be needed to ensure detection and deterrence or destruction of a submarine outside the whole of the submarine attack perimeter. Escorts will therefore have to be spaced on this perimeter at not more than twice their average detection range apart. The minimum number of escorts necessary to ensure a high probability of detection of an attacking submarine is thus determined by the length of the perimeter divided by the product of twice the escorts' average detection range. If this distance be, say, five miles, and it be considered that the submarine attack perimeter is likely to be five miles from the ship to be attacked, then the number of escorts required to provide efficient defence to a single ship is three.¹⁶ If 400 merchant ships be scattered in the approximately 10,000,000 square miles of the North Atlantic it is manifestly impracticable to ensure the safe passage of each ship in the face of a submarine threat, because this can only be done adequately by escorting each ship, and because this would necessitate a force of 1,200 A/S (anti-submarine) vessels at sea, not counting their reliefs.

It is sometimes suggested that a solution is to be found in a system of fixed sea routes constantly patrolled by anti-submarine craft to make them safe for ships. However, it can be shown mathematically that under this arrangement the probability that submarines would quickly find ships and sink them unopposed is very high, and that the available A/S craft would be able to oppose many submarines attacking ships is very low. These probabilities are, indeed, overwhelmingly confirmed by the statistics of the last two world wars. For instance, during the first six months of 1917, when A/S forces were almost entirely confined to 'offensive patrols' of 'safe routes' (the contemporary terms), a daily average of 35 submarines at sea in all areas sank a total of 1,500 merchant ships of all tonnages. In exchange, the several thousand allied A/S patrols destroyed a mere dozen submarines. Again, in the first two months of the second World War, a force at sea of, on the average, eight U-boats sank 12 per cent. of the British ships passing through the Western Approaches independently. In the early months of 1942 less than a score of U-boats sank 20 per cent. of the ships sailed independently along the A/S patrolled waters off the United States eastern seaboard, with negligible loss to themselves. Indeed, of all the ships sunk by U-boats

¹⁴ In the second World War imports were reduced only progressively, and only to 48 per cent. of the pre-war level (in 1942), after which year they were progressively increased.

¹⁵ Debate on the Naval Estimates, 14th March, 1935. (*Hansard*, Vol. 299.)

¹⁶ Number of escorts = $2\pi (\text{Radius of Convoy} + \text{Submarine Attack Range})$
 $2 (\text{Escorts' Detection Range})$

in the second World War, the majority (70 per cent.) were sailing independently. Of U-boats sunk by the Allies, the majority were sunk by convoy forces.

Although the spacing of ships sailed independently along patrolled sea routes is likely to make attacks upon them with nuclear weapons uneconomic, clearly, as in the last two world wars, merchant ships can still be sunk efficiently with conventional weapons; and the foregoing shows that a very high percentage would be so sunk if sailed independently, whether dispersed or in 'lanes.' Thus, although the risk of nuclear attack can be substantially reduced by independent sailings, the high probability of loss is undiminished. Undiminished also is the high probability of the U-boats operating without loss. What would be the probable results of a convoy system?

First, during the second World War, losses in convoy amounted to only 30 per cent. of the total losses inflicted by U-boats. Secondly, when losses in convoy were studied in early 1943, it was shown by operational research scientists of the Admiralty that, in 1941 and 1942, the heaviest losses had occurred in the smallest convoys. They then calculated that, if the average size of convoys were increased from 32 ships to 54 ships (a 70 per cent. increase), there should be a reduction in the current loss rate of 56 per cent.—from 2.5 per cent. to 1.1 per cent. of ships sailed.¹⁷

The validity of this deduction is confirmed by analysis of the published figures of convoy sizes and losses in the first World War.¹⁸ This reveals that there was, in fact, a comparable relationship between convoy sizes and losses. Thus it can be taken as an operational law of maritime war that, with a given A/S force and threat, in any given period the highest loss rate will be inflicted on ships in the smallest convoys; and that, if the same number of ships be sailed over a similar period, but the size of the convoys sailed be increased by opening out the interval between convoys so that fewer convoys are sailed, the loss rate will be reduced. Thus if 400 ships are sailed in 10 convoys of 40 ships and each convoy loses five ships, the loss rate of the ships will be 12.5 per cent. and the total losses will amount to 50 ships. If the 400 ships be sailed in one convoy and it is attacked, both theory and experience suggest that the loss rate will be only about 3 per cent., or 12 ships.

The explanation of the smaller loss rates experienced is that, as the number of ships in a convoy is increased, the area increases in direct proportion but the perimeter increases only as the square root of the number of ships, and the defence perimeter on which the escorts are stationed increases even more slowly. From this it follows that the number of escort vessels needed to guard the perimeter of a convoy is a good deal less than proportional to the number of ships to be escorted; in fact, less than proportional to the square root of the number of ships.¹⁹ Indeed, if the escort force available be 40 A/S vessels, that of the one large convoy will consist of all 40 A/S vessels, that of each of the ten small convoys of four A/S vessels. Assuming similar inter-ship spacing (two miles) of the ships in convoy, the escort density on the perimeter of the large convoy (173 miles) will clearly be much greater than that on the perimeter (76 miles) of each of the small convoys. From this it follows that if a convoy with an escort density of one to 19 miles of perimeter loses five ships, a 400-ship convoy with an escort density of one to every 4.4 miles of perimeter is likely to have much fewer losses. Also, in an area the size of the Atlantic, the

¹⁷ Blackett, P. M. S. (1948). "Operational Research," *The Advancement of Science*, Vol. 4, No. 17.

¹⁸ Newbolt, H. (1931), *Naval Operations*, Vol. V (Appendices).

¹⁹ Crowther, J. G. and Whiddington, R. (1947), *Science at War*, p. 101.

probability of submarines intercepting a small (and less efficiently screened) convoy, as there are ten of such convoys, will be ten times as great as that of intercepting a single large convoy; while the probability of the submarines being destroyed if they do encounter the convoy is increased on the basis of escort density, over four-fold around the convoy.

To the argument that ships in large convoys will invite the use of nuclear weapons because the size of the target would make their use economic, it is sufficient to point out that, by appropriate spacing of the ships in convoy, the effect of nuclear weapons can be reduced to that of conventional weapons. This same spacing has the additional virtue of making the business of sinking a ship much more difficult for a submarine, no matter what weapon is used. So not the least of the virtues of this convoy solution is that the number and variety of the maritime forces required to implement it are within the bounds of practicability.

Shipping loss rates are reliable and factual measures of an enemy's success or failure to sink ships. They are equally, and this is much more to the point, reliable factual measures of the success or failure to defeat the threatening forces. Historical research shows, indeed, that the shipping loss rate has been highest when the loss rate of the enemy forces has been lowest, and lowest when the loss rate of the enemy's forces has been highest. In the first World War not only were U-boat attacks virtually frustrated by large (by those standards) convoys, but U-boat losses were increased although only a fraction (about 15 per cent.) of the allied naval forces were operated on the convoy system to oppose U-boats. Again, in July, 1942, Doenitz, commanding the U-boat fleet, warned the German people in a broadcast that the 'happy' time enjoyed by U-boats in American waters during the first six months of the year when, in the absence of a convoy system, they sank ships without risk to themselves had come to an end. He stressed that heavy U-boat losses would now have to be expected in the battles already developing between the A/S forces, as they became organized into convoy forces, and the U-boat packs. He was right. In the last six months of 1942 the tonnage sunk per U-boat per day was 60 per cent. smaller, and the percentage of U-boats at sea sunk was 50 per cent. larger, than in the preceding 'happy' six months.

When the Admiralty operational research scientists calculated that an increase in the average size of Atlantic convoys of 70 per cent. should reduce the loss rate by 56 per cent., what in effect they were postulating was that an increase in the average size of convoy would probably make the U-boats' task of sinking ships so much more difficult by this single measure that their attack efficiency would be more than halved. At the same time as the scientists recommended increasing the size of convoys they made other recommendations based on study of the relative effect on convoy losses of convoy speed, of escort strength, of escort efficiency, and of air escort. Of these recommendations all, except that concerning convoy speed, could be effected, but only by reducing the number of convoys and increasing their size in order to maintain the number of sailings over a given time. When this was done, as it was early in 1943, the effect, in so far as the U-boats were concerned, was almost instantly catastrophic. Almost overnight the convoy forces became virtually 100 per cent. efficient—between May, 1943, and May, 1945, U-boats succeeded in sinking only 12 ships in the Atlantic out of over 400,000 sailed in ocean convoys; the convoy forces were so efficient in defence because they were also devastating in attack. Throughout the period, with little loss to themselves, they destroyed scores of U-boats. The U-boats' loss rate had never been higher nor the convoys' loss-rates lower, and this was primarily the

result of a marginal redeployment of A/S forces on the basis of small adjustments to the mercantile convoy system.

Thus, if the object of defeating hostile submarines is to be achieved, it would appear, from both theory and practice, that it would probably be achieved most rapidly and economically by forcing the submarines to fight against large convoys.

What is true of defeating submarines is no less true of aircraft. From this, the probability follows that, in order to defeat aircraft attempting to sink our ships, our available anti-aircraft forces should be deployed with ships sailed in large convoys. By this system, at the very time and at the very place that the attackers least desire and are least able to give their undivided attention to the opposing forces, they are obliged to fight them and cannot concentrate on attacking the merchant ships which, if they are to justify their existence, they should be sinking. A further advantage of this system is that our anti-aircraft forces concurrently provide the best practicable defence for our A/S forces against air attack and themselves receive the best practicable defence against submarine attack. If, then, an enemy should attempt a sea blockade, it would appear probable that the issue would be settled by a series of great convoy battles. This, let it be noted, is the traditional way in which, in past centuries, sea blockades have been broken.

To conclude, if a sea blockade be a more efficient means of making an enemy change his mind than self-immolation in a funeral pyre, as the history of the Japanese war suggests, why should it not be attempted against us? Again, if a sea blockade can be broken by measures more efficient than those also involving self-immolation in a funeral pyre, why should the means of carrying them out—maritime forces—not be provided? There are more ways through the wood than one. Nor is it beyond reason to suppose that, if hostilities should occur at sea they cannot be limited to that theatre, as the Berlin blockade was to Berlin and the Korean War was to Korea, out of a mutual sense of self-preservation or, as Kipling has so aptly put it, out of 'ties of common funk.'

The object, let it be repeated, is not self-destruction but to change the opponents' mind, and this, let it be repeated again, is true of both belligerents.

"It may be said now to England, Martha, Martha, thou art busy about many things, but one thing is necessary. To the question, what shall we do to be saved in this world, there is no other answer but this, look to your moat. . . . The first article of an Englishman's political creed must be, that he believeth in the sea. Without that there needeth no general council to pronounce him incapable of salvation here."²⁰

²⁰ Halifax (1694), *Rough Draught of a New Model at Sea*.

AIR POWER IN LIMITED WARS

By AIR MARSHAL SIR ROBERT SAUNDBY, K.C.B., K.B.E., M.C., D.F.C., A.F.C.

THE revolution in strategy brought about by the invention of nuclear weapons has repercussions far beyond the military sphere. It has not only changed the nature of war and made obsolete many of the factors which used to condition strategy; it has altered fundamentally the part played by war itself in international relations.

Though in time some form of defence against long-range rocket missiles may become available, we are on the threshold of an era in which the offensive will be raised to a position of unchallenged superiority. The immense power of these new weapons, and the impossibility of providing even a degree of safety against their all-pervading destructiveness, has made nonsense of many of the old-established military doctrines, and even of some of those newer ones which have been evolved to rule the conduct of three-dimensional warfare.

What is to be the rôle of air power in the missile age? For the last 12 years the air power of the West has been the main, almost the only, deterrent to the outbreak of full-scale war. The principal instrument of air power has been and, it is important to remember, still is the long range bomber armed with nuclear and thermo-nuclear weapons. The development of the long-range rocket-driven ballistic missile with a nuclear or thermo-nuclear warhead has now reached the stage at which we can foresee that it will largely replace the bomber as the great deterrent. It is not easy to assess the time needed for this change to come about, but it is unlikely to be more than a decade. In view of this the Government has decided not to develop a successor to our existing family of 'V' bombers, but to rely on the long-range ballistic missile being available to replace them as they become obsolete.

When this happens we shall arrive at a complete stalemate which can be described as an extreme development of the idea of a balance of power. Everybody will know that those nations armed with these weapons will be able, by pressing a button, to destroy a chosen adversary. If, however, that adversary also possesses the weapon, or has a military alliance with a nation that possesses it, the aggressor will know for certain that he too will be destroyed in his turn. When we reach this stage it will confer no advantage to possess twice as many, or even ten times as many, rocket weapons as your adversary, provided that he possesses the minimum necessary, after allowing for errors and omissions, to ensure your destruction. There is thus a saturation point beyond which there is no sense in stockpiling further weapons of this nature.

It would appear that the cost of upkeep of a rocket missile system should be much less than that of a strategic bomber force. Manned aircraft have to be kept serviceable by use and their crews maintained in a high state of efficiency by continual training in the air. The aircraft and their engines need constant repair and overhaul, and they grow obsolescent and have to be replaced. Their crews grow old and new ones must be trained to take over from them. By contrast, the rockets should have a long life, and once proved and tested would not have to be used except on a small scale to try out improvements and ensure that those who operate them are conversant with their duties. The missiles need only to be kept ready for immediate use in conditions which reduce deterioration to a minimum. We may therefore hope that once the cost of developing, producing, and stockpiling these huge weapons has been

met, the annual expenditure in upkeep, in terms of manpower, money, and equipment, will be relatively small.

While the nuclear stalemate will make full-scale war unlikely in the extreme, it will not put an end to international rivalry, jealousy, and hostility which, as in the past, will cause friction and ill-feeling between nations. Indeed, it seems certain that the standard of international behaviour, already lower than it has been for centuries, will deteriorate still further. In the days when resort to large-scale war was possible without the risk—almost the certainty—of national suicide, the behaviour of all nations was maintained in peace-time at a reasonable standard. They knew that if they went too far they would be faced with the threat of war and, if they persisted in injury and provocation, with war itself. Nowadays that sanction has been largely removed and we have seen many nations indulge with impunity in flagrant treaty-breaking and damage to the major interests of other countries which, before the invention of nuclear weapons, would not have been tolerated.

Since the second World War the nations of the free world have had to submit to outrageous misconduct on the part of some of their neighbours because they feared that any attempt to assert their rights by means of force would provoke a conflict that might lead to global war. And, since the United Nations is entirely impotent in the matter, they have been compelled to endure a degree of hostility and international mischief-making, under cover of so-called peaceful co-existence, that would have been unthinkable in former days.

This cold war, which is a new development in international relations—being neither war nor peace—flourishes under the shadow of the nuclear weapon. Since, however, the nuclear weapon and western air power are the sole means of deterring the Communists from resort to global war, we cannot forego these weapons. But we have to recognize that, in preserving the means of preventing full-scale war, we have created the ideal conditions for the cold war.

The cold war is fought with non-violent weapons against which armaments are of no avail. The weapons of the cold war are political infiltration, direct propaganda appeals to peoples over the heads of their governments, the encouragement of subversion, the skilful exploitation of grievances, the exacerbation of international antipathies, and industrial and economic sabotage. These weapons are so powerful and so damaging that no country with a spark of spirit would have endured them for long in former times, but nowadays they have to be endured lest worse befall.

The United Nations does not recognize the cold war. It sees no aggressiveness, no threat to peace, in the most outrageous interference in the affairs of another country with all the weapons of the cold war, provided that no direct military action is involved. If an unfortunate country, driven to desperation by these brutal pressures, should resort to force, it will find itself arraigned before the United Nations as an aggressor, with the Powers that have goaded it to action sitting in the seats of judgment.

In these circumstances it obviously does not pay the Communist Powers to use military force except in especially promising conditions where their aggression can be disguised in the confusion of events and their aim can be safely and rapidly achieved. They can then present to the United Nations a *fait accompli*, and nothing short of a deliberate military operation in considerable force can dislodge them. Experience has shown that in such circumstances fear of embarking on a conflict, which might lead to global war, will inhibit action.

Resort to war, even limited war, is thus denied to the victims of the cold war except at the cost of being branded as aggressors by the United Nations, and having world opinion and sanctions of various kinds mobilized against them. And, as long as the cold war is yielding good dividends, the Communist Powers will be tempted to resort to military force only in exceptionally favourable circumstances. It follows that we shall not have to face many limited wars, but when we do so, it will almost certainly be in peculiarly adverse conditions. The most likely form of limited war was exemplified by that in Korea, in which a satellite Communist government, armed and encouraged by Moscow or Peking or both, attempts to extend its rule over some free area. The military task of the free world would be the defensive one of repelling an aggression, or of recovering territory already overrun. While the military quality of the aggressors may not by western standards be very high, they will enjoy the advantage of the initiative and, by means of surprise and concentration of force, they may achieve a substantial initial success.

Our task in successfully meeting such a challenge will be complicated by two factors of outstanding importance. The first is the need to ensure that the conflict does not get out of hand and lead to full-scale war. In other words, we must ensure that the war remains limited, and to that end it will be necessary to accept such restrictions on our military operations as are judged to be politically essential. Secondly, since every day that passes will reduce our chance of success, we must organize our forces in such a way as to ensure that they can quickly be deployed at the decisive place. Unfortunately, the influence of these two factors on our policies may, to some extent, conflict with each other.

With regard to military restrictions imposed for political reasons, these are likely to be a prominent and, from the point of view of those responsible for the conduct of operations, a very unwelcome feature of limited wars. But both sides will be anxious to avoid any action which would risk enlarging the conflict. In Korea, both the Communists and the United Nations accepted a partial failure rather than resort to policies which, although strategically sound and, by all normal military criterions, perfectly legitimate, were thought to be politically dangerous. The general principle must be to define a limited aim clearly and publicly, and to confine military, and especially air operations, as far as possible to the destruction of the armed forces of the enemy; a partial reversion, in fact, to the 'classical doctrine.' It is impossible, however, to lay down beforehand the form which these restrictions are likely to take in any given set of circumstances, and each case will have to be judged on its merits by the governments concerned after carefully balancing the military and political factors.

This is a process which could well consume much time, but if complete failure is to be avoided very little time will be available. A quick decision, at least on the main questions involved, will be essential.

As it is improbable that the Communists would resort to military aggression in areas in which we had substantial forces readily available, the prompt and effective deployment of our forces will usually involve a rapid concentration and movement to the threatened area. This, as we saw in the Suez operations in 1956, is not always easy to ensure. There can be no doubt that the lack of air transport and the unsuitability of Cyprus as a base, necessitating a concentration in Malta and a slow sea passage to Port Said lasting six days, coupled with restrictions on the employment of our air and land forces designed to reduce to a minimum casualties to civilians and

damage to Egyptian property, were the main causes of our failure. They allowed time for political forces to develop which proved decisive.

The problems facing us in limited war, involving rapid concentration and movement to the theatre of war followed by operations hampered by various restrictions imposed for sound political reasons, are indeed of exceptional complexity. The primary task of air power must therefore be to assist the land forces. Aircraft will be required to transport them to the scene of action; to establish the requisite degree of air superiority; to provide direct support in battle; to interdict, as far as possible, the battle zone; and to provide a reliable and flexible system of air supply. For these purposes we shall need fighter and/or fighter ground-attack aircraft, light bombers, fast long-range transports, and heavy freighters. We shall also need helicopters to carry supplies from the forward base depots to the fighting troops, and to evacuate the sick and wounded.

In all this family of aircraft, the maximum possible performance, combined with the ability to operate from small or medium-sized airfields, will be of great importance. Until all military aircraft are capable of vertical take-off and landing—which will come in time—we must make the best possible use of such devices as jet-flaps, by-pass turbo-jets, and laminar flow to reduce the take-off and landing run. Having handed over, to a large extent, long-range bombardment and local air defence to various forms of rocket missile, most types of military aircraft will be freed at last from the inexorable rule that each generation must be able to fly faster, higher and farther than its predecessor. We now can, and must, design aircraft to carry out the more specialized, but none the less exacting, tasks with which they will be faced in limited war.

The ideal, if it could be attained, would be a fighter ground-attack aircraft with a dual rôle. If the enemy has any air forces they must be destroyed or defeated. This may be done by shooting them down in the air and by destroying them on the ground. The ideal fighter ground-attack aircraft would be capable of both these tasks, and in addition would undertake the destruction of small military targets with bombs and air-to-ground rocket missiles. It would be an advantage if it were powered by a jet engine for bombing and ground-attack work, with a rocket motor in addition for use in air fighting, with air-to-air rocket missiles, when needed.

The light bomber would be capable of longer range strikes at military targets such as bridges, centres of communication, dumps, and troop concentrations. Both these aircraft would be suitable for photographic or visual reconnaissance.

The light bomber, and possibly the ground-attack fighter, should also be capable of using small-yield atomic weapons in the form of bombs and air-to-ground rocket missiles. The question, as yet unanswered, is whether it would be possible to use such weapons in a limited war without risking the enlargement of the conflict. To a large extent this depends on how small and 'clean' these weapons can be made. Obviously a weapon having the destructive power and radio-active consequences of the A-bombs used at Hiroshima and Nagasaki in 1945 would need to be employed with great discretion if the limited character of any war is to be preserved.

The difficulty, however, is that tactical atomic weapons delivered by guns, mortars, ground-to-ground, and air-to-ground rocket missiles will soon be standard equipment in conventional forces. The Americans have already gone a long way in this direction, and a study of contemporary Russian military literature shows that they have gone at least as far, if not farther.

A nation whose armed forces taking part in a limited war were nearly obliterated by such weapons might be so shocked and enraged that an almost irresistible urge to make a direct attack on the enemy with the ultimate weapons might arise. Governments, no doubt fully appreciating the consequences of such action, might wish to stand firm, and in such circumstances we have to face the fact that it is the western nations, and not Russia, that are most likely to lose their heads. In America or Britain for instance, public indignation would be so great that the government would need courage, firmness, and coolness to withstand it successfully. By contrast the totalitarian government of the U.S.S.R., with its tight control over all news services, could suppress the news or minimise it, and in any case is not nearly so much influenced by public opinion as are the governments of the free democracies. It is clear that such weapons, if they are to be used at all in limited war, must be very carefully controlled.

The most important thing about military air transport is that there should be enough of it. As Lord Montgomery has said, "No nation could afford to give to *one* Service the amount of air lift that Service would need at any particular peak moment in war . . . If the air lift organization is to be an organic part of an army, it will cost more than if it was under the air forces; and the army will never have enough." And he also pointed out that "an air lift organization must be dovetailed into air operations; you cannot separate an air transport system from air operations." He also stressed the importance of having in peace-time a sound logistic and movement organization, sufficient to ensure success in the opening weeks of war.¹

The free world must be able to move by air sufficient troops and air forces rapidly to meet any Communist aggression, wherever it may occur, and the Commonwealth must be able to play its part in such operations. It is easy to say this, but the ability to do it in practice needs a carefully planned deployment of our forces in peace-time, accommodated in suitable bases with good facilities and communications, and an air transport system of sufficient size to cope with the problem. The Suez operation high-lighted our inexcusable shortage of aircraft for this purpose, and at the same time demonstrated in a most striking manner the value of such aircraft as we did possess.

The question of air supply is no less important. Our greatest weakness in Korea was the dependence of our forces on a road-borne system of supply. Quite small bodies of the enemy, using mountain tracks, frequently worked their way round behind our forces and set up road-blocks which interrupted our communications. At first the United Nations forces were halted and even compelled to retire when this happened, but they learned to stand their ground and to rely on air supply until the enemy had been dislodged. This was not difficult, as they were seldom in numbers and were usually lightly equipped. What is now needed is an air supply system that can operate all the time, with helicopters carrying supplies to the fighting formations from a number of small forward bases, which will themselves be replenished by air from depots outside the combat zone.

Apart from the use of air power, in conjunction with naval forces, in the protection of our ships and for anti-submarine warfare, which for reasons of space must fall outside the scope of this survey, there is another form of limited warfare in which air forces will be called upon to play a primary part. Throughout the world, wherever we have valuable strategic or economic assets, we shall find our position threatened

¹ R.U.S.I. Journal: November, 1954, pp. 514-516.

by various forms of local unrest. These disturbances may vary from civilian terrorism, as in Cyprus, Malaya, or Kenya, to the use of armed force as in Oman and on the borders of the Aden Protectorate and the Yemen. But whatever form they may take, these disorders have much in common. They are the product of an inflamed nationalism, encouraged and exacerbated by the Communists, who also miss no chances of exploiting xenophobia, cupidity, and hysterical anti-colonialism. Their ultimate object is to drive us out, while their immediate aim is to cause us as much worry and expense as possible and to tie down our forces in difficult and disagreeable police operations. These disturbances also have considerable propaganda value, as we can be made to appear—to those who are ignorant of the facts, at home and abroad—as the brutal oppressors of peoples struggling to be free.

It is obviously in our interests to be able to deal quickly and easily with such disorders, avoiding as far as possible bloodshed and damage to property. In Cyprus and Kenya air power could do little to help the land forces in dealing with what is essentially a police problem. In Malaya they could do more, but again their rôle was to support the Army acting in aid of the civil power. But in such places as Oman and the hinterland of Aden, air forces can play a primary rôle in repelling aggression and maintaining law and order. For this purpose we need a light type of aircraft, capable of using small conventional bombs and air-to-ground rocket missiles, of no great speed but highly manoeuvrable at low altitudes. It should be able to operate from really small improvised landing grounds, and apart from a capacity to carry additional fuel tanks giving it a range of some 1,500 miles, its equipment must be kept as simple as possible. Those with the mentality of the White Knight should not be allowed to clutter it up with anything and everything that might, at some time or other, be of use. Jet propulsion is not required and, indeed, the old-fashioned piston engine would probably be the most suitable.

In dealing with these disorders the essential thing is to be able to act quickly and effectively, nipping troubles in the bud before they have had time to spread and become serious. We have had many years of experience of the system of air control of undeveloped countries, and we know that aircraft of suitable type, used promptly and in accordance with well-tried principles, are of the greatest value for this purpose. They are economical and efficient, and their operations can be carried out successfully with a minimum of casualties to both sides.

I suggest that the foregoing are, broadly speaking, the main tasks that will confront manned military aircraft in limited wars in the age of missiles. The emphasis is changing, and before long we may cease to regard long-range bombardment or air defence as the main tasks of our military aircraft. These important rôles will in future be mainly entrusted to various forms of rocketry, and our aircraft will be chiefly concerned with winning the air battle, and with transporting, supplying, and supporting forces engaged in limited wars. In addition, they can be used in a primary rôle to maintain law and order in the less well-developed areas under our flag.

This is a change of emphasis but it does not involve any diminution of responsibility, as success in limited war will be impossible without adequate air power. Since limited war, so long as we maintain the nuclear deterrent, is the only kind of war we are likely to be called upon to fight, our air power, based on manned military aircraft, will be no less an important part of our defence organization in the future than it has been in the past.

ANGLO-GERMAN NAVAL NEGOTIATIONS ON THE EVE OF THE SECOND WORLD WAR—II

By D. C. WATT

THE effects of the weekend crisis of 21st May, 1938, on Hitler were immediate, violent, and far-reaching. He reserved his undying vengeance for the authors of his humiliation, the Czechs. On 30th May, he announced to his generals his unalterable determination to smash Czechoslovakia at the earliest possible moment. But the incident seems also to have tipped the scales against Britain in the curious balance of love and hate which governed Hitler's attitude to her. On 24th May he called for a major speed-up in the naval construction programme. The *Bismarck* and the *Tirpitz* were at all costs to be completed by the spring of 1940, six new slipways for large ships must be prepared so as to enable speedier construction of more capital ships and heavy cruisers, the German U-boat fleet was to be raised as soon as possible to a level of 100 per cent. parity with that of Britain. "The Führer must reckon that France and Britain stand on the side of the enemy," Raeder told his officers. The decision meant that the days of the Anglo-German naval agreement were inevitably numbered though it was still to be maintained as long as possible. Negotiations on the 100 per cent. figure for U-boat construction were to begin on 1st October, but when Raeder was told that U-boat construction could at once be raised by the available shipyards from 24 to 36 U-boats annually, he took no action.

At this distance of time his inaction seems to us, as it did to the officers of the German Navy during the war, well-nigh incredible. But the emphasis in German naval thinking, at least among those responsible for the direction of naval policy, did not lie on submarine but on cruiser warfare. Raeder himself had written the volumes in the official German history of the first World War which dealt with cruiser warfare. And the Plans and Operations Division of the German Naval High Command beneath him planned very largely in terms of cruiser warfare against British commerce. In such a conflict they felt that the U-boat would inevitably be the loser. The large numbers of British destroyers, the obvious sensitivity of the Royal Navy to submarine warfare which it was felt must have led to immense strides in anti-submarine development at a time when Germany was reduced to all kinds of subterfuge to keep even the nucleus of a submarine warfare staff together, the comparative ease with which Britain's shipyards could turn out large numbers of small escort craft at short notice once it was known that a political enemy was concentrating on submarine production, all of these were factors which led the official school of naval thought in Germany to belittle the submarine arm. It was felt that Germany had once before concentrated on submarine warfare and had been defeated.

There were however profounder psychological factors at work. In the words of Admiral Assmann, the official German naval historian, "a U-boat power is not a sea-power. Germany had however since 1933 in ever-increasing measure the desire and will to become a sea power . . . the target of the German naval construction, as of the general build-up of her armed might and her state, was to become a world- and a sea-power like England, not merely a U-boat power of the first rank with all its narrow limitations and obvious aggressive intentions."

The fleet that Raeder intended to build was a balanced fleet able to hold down a section of the British fleet and cause the remainder to split up in defence of the convoys so essential to her well-being. The role of the submarine was to harry the

convoys in their home waters, to shell the British coastline (great weight was laid on the development of monitor or heavy gun submarines), and to deal with the ships of the convoys which had scattered under the attack of the heavy ships, as they did with the ships of the ill-fated convoy PQ 17 on the Iceland-Murmansk route in 1942.

The long summer of 1938 was spent in working out the details of the accelerated programme demanded by Hitler. But while the naval construction officers were bickering for labour with the Four-Year Plan organization headed by Goering, over-riding the objections of the shipyards who still wished to reserve half their capacity for merchant ship construction, and debating the merits of various building programmes, the Naval War Staff was engaged in negotiation with Britain, France, and Italy, and the crisis which was to break at Munich was gathering heavily day by day.

The negotiations with Britain were unimportant in themselves but came in time to legitimize the excessive size of the *Bismarck*, *Tirpitz*, and their successors. A Japanese decision to ignore the limitations she had refused to accept at London and to build super-battleships of 45,000 tons and upwards came to the notice of the London Treaty signatories some time during early 1938. A joint protest to Tokyo proved useless and they were faced with the need to invoke the Treaty's escalator clause and raise the permissible limits of battleship construction. By protocols signed on 30th June, 1938, these were raised to 45,000 tons and 16-inch gun calibre. The British were anxious to set 40,000 tons as the new limits but failed to convince the U.S.A. of the justice of their case. Backed by France and Italy, who saw their battle fleet, built at such cost, robbed at one stroke of its value, Britain then attempted to negotiate a system of limitation to 40,000 tons among the European powers. The French indeed announced their intention of remaining at 35,000 tons providing no other continental power overstepped these limits. And Italy brought considerable pressure herself to bear on Germany to follow this example, arguing that otherwise all the existing battleships would lose their value immediately. The Germans however refused to accept any system of limitations that was not universally accepted.

They could hardly do otherwise in view of the onrush of the Czechoslovak crisis. The summer was filled with its developments, and this led the Naval War Staff to revive their demands for staff talks with Italy, Spain, and now with Japan also. The first demand was included in a memorandum of 18th August, which was repeated on the 31st. And the first contact was made through the Japanese and Italian Naval Attachés in Berlin on 15th September. The Italians accepted at once; the Japanese acceptance arrived only at the last moment of the crisis (29th September), one day before the Munich agreement was signed.

Immediate German-Italian staff talks were agreed on 27th September, to take place two days later, in which direct Italian participation on Germany's side was envisaged. The talks were, however, called off the next day when Mussolini decided that the role of mediator fitted him better than that of a German ally in what he thought to be a hopeless war. His intervention and Chamberlain's third flight to Germany ended the crisis, but the idea of staff talks and an alliance lingered on.

At the same time the Navy's building plans were crystallizing. In August Raeder ordered that all necessary pressure was to be brought to bear on the commercial firms whose inability to meet delivery dates was imposing such delays on the naval rearmament of Germany. He was told that 100 per cent. parity with Britain in submarines could be reached by September, 1942, if each of the shipyards could increase their labour force by 1,000 men. He ordered that at least four monitor

submarines were to be ready by that date, "as these he considered especially important for cruiser warfare against England."

It is a mark of the muddle into which the unexpected violence of the Czech crisis had thrown the otherwise balanced and efficient organization of the German Naval Staff offices that it was on 22nd September that Admiral Guse submitted for Raeder's approval the first draft of a Note to Great Britain on the submarine question, and that the Note used only the old arguments of an increased Soviet threat to Germany which, as we have seen, Guse had originally prepared nearly a year previously. Guse's cover note showed his bewilderment and caution:

"As the establishment of this claim is in the last resort a purely political question, the military justification of this claim does not go into details, but the basis for the extent and timing of our demand has been formulated in general terms so as to offer no opportunities for fruitless discussion on details of the arguments used to justify our action. We have also avoided using *all* the arguments which speak for an alteration of the existing treaty relationship and demonstrate the alteration in our naval strategic position since 1935. One should avoid using up now those arguments which can still be used to justify further measures in the future.

"It is for the politicians to decide if this shall take place as a single move on its own, or be combined with the announcement of the conversion of 'K' and 'L' which falls in January [the two 8-inch cruisers]; or whether, if the Führer intends in the foreseeable future to broach the question of the continuation of the 35 per cent. Treaty in the course of a general clearing-up of our relations with Britain, the completion of these two individual questions should be postponed on political grounds to that moment."

Little wonder that Raeder noted, "Decision only possible when present position clarified." Fricke, of the Plans and Operations Division of the Naval War Staff, also saw this document and wisely noted that the date of denunciation of the naval agreement should so far as possible not be brought into connection with this measure, and counselled a press campaign on the growth of Russia's submarine fleet.

Once the Munich crisis was over, the Navy wished to push ahead with the negotiations with Britain as time was pressing. They still had not received any reliable information on Britain's naval construction plans, and were still faced with the possibility that one at least of the battleships included in the 1939 programme, let alone the two of the 1940 programme for which the contracts would have to be awarded in 1939, would not be covered by the British figures (the first battleship of the 1940 programme would under the terms of the 1935 agreement have to be announced to Britain in April, 1939, at the latest). In spite of renewed representation on 5th October, no reply was received and the naval authorities were led to assume that "the English were not playing fair." Even in July Raeder had instructed the Naval Attaché in London to emphasize that they expected "loyal and timely information as the precondition for the possibility of carrying through the Naval Agreement." They refused to believe that no further battleships were to be laid down by Britain beyond the two announced in 1938. They assumed the British were taking advantage of the letter of the obligation to communicate the strength of their battle fleet in 1942 in order to avoid saying anything about ships not completed by that date. They therefore proposed a transformation of the system into a revolving one, by which the estimated British strength of five years from the current date should be given to them each year.

More important than this, however, was the cruiser and U-boat issue. On 7th October a second draft note announcing the German decision was produced in the German Admiralty. But when it came to be discussed with the German Foreign Ministry it was discovered that the diplomats were inclined to deprecate opening of the question at that time as it would burden the "reorganization of Anglo-German relations." The conversation is so extraordinary and throws such a light on the relations between the permanent civil servants of the German Foreign Ministry, the German forces, and Hitler as to be worth quoting:

"1. On the U-boats and 'K' and 'L' rearming . . . the U-boat question will cause extraordinary comment in British public opinion, the cruiser question will possibly have repercussions on other powers . . . the State Secretary [Weizsäcker] proposed that at the report the Commander-in-Chief, Navy, envisaged making to the Führer at the end of October he should also discuss the political repercussions of the two measures and ask expressly that no decision should as yet be taken. The basis of this proposal was that it was counted on discussing, among other things, the colonial question with the British Government in November. In view of the atmosphere to be created for this purpose the Führer should not yet be pinned down to decisions on naval matters (which in his present mood towards England would certainly be made as strong as possible), which would again make conversations on the colonial question impossible for a long time. . . ."

The Foreign Ministry had in fact some basis for their expectations and fears. The published British diplomatic documents show that this was the high tide of the appeasement policy in Britain. Trade concessions were to be made to Germany. She was to be enmeshed again into the web of economic activity from which the 1934 repudiation of debts, her practice of economic autocracy, and Hitler's preference for *Machtpolitik* before *Interessenpolitik*, power politics before legitimate interests, had cut her free. But Hitler himself was raging. England and Italy between them had cheated him of the war, destruction, and victory he craved. Ribbentrop, his jackal, was working all out for an alliance with Italy and Japan, and a settlement with Poland probably to launch a joint attack on the Ukraine, while the naval staff officers planned the building-up of the fleet and the basis for new staff talks with Italy and Japan.

On 31st October plans had advanced sufficiently for Raeder to receive his experts in conference again. The building plans had been winnowed down to three alternatives which he was to place before Hitler. On 17th November the Navy was provided with a new 'final target,' made necessary by "the new tasks before the Navy, arising out of the altered political and strategic situation." The Navy's task was to build up its strength as quickly as the Army and the Luftwaffe. This target must be reached as far as possible by 1945, but the special tasks before the Navy would mean that a programme of priorities would have to be drawn up.

"Equal strengthening of all classes of ship would produce the desired military and political effects relatively later in view of the advantage in numbers which England possesses against us today and for years to come. Her geographical position lets this superiority weigh even heavier in the scales and drives further forward in time the date when our growing Navy will take on a form threatening to her. To avoid this, that is to have the Navy ready to realize all its strength at the same time as, for example, the Luftwaffe, a system of priorities is necessary for the naval construction programme. It is conceived in the form

that will give priority to those striking forces which are suited to waging independent oceanic war. To this purpose the U-boat programme in U-cruisers, mine-laying, and ocean-going submarines should be completely carried through by 1943. . . . The matter is especially urgent, as the armaments programmes of all sections of the armed forces are to be reported to the Supreme Command by 5th December, so that the complete armament of the armed forces can be organically arranged according to the aims of the political leadership."

As their plans advanced, so the Naval Staff began to think more in terms of denunciation of the Anglo-German naval agreement than ever before. On 7th November, the British Government finally communicated its decision on the older battleships, which legitimized the construction of the two German battleships to be laid down in 1939, and no more.

About the same time Raeder saw Hitler and obtained from him the final decision. For the time being the agreement was still to be maintained, but all available possibilities under it were to be made use of. The Foreign Ministry could choose as it liked the time when the subject was to be broached to the English so long as the delay did not hold up the naval programme.

There were other subjects also to be discussed, the German proposal for an adjustment of the terms in which the British advance notification of strength was to be made, for example. There was also the British proposal, dating from 30th June, to limit all battleships built by European powers to 40,000 tons, which Italy strongly supported. It had certain advantages, as Guse's successor, Schniewind, noted; both the Italians and British would be satisfied and the two battleships already constructed would not lose in value. Its disadvantages were that a new formal commitment would be entered upon which "... is no hindrance to us as the remaining battleships tonnage will be taken up in the coming year whatever happens." The new commitment would be disadvantageous later if, "in order to continue building, only the quantitative Treaty of 1935 (35 per cent.) is to be denounced while the qualitative commitments however remain valid." Raeder noted, "Certainly no new commitments," and, "How can we be free of the obligation to notify (i.e., the British)? Would it not be better to denounce straight away?"

As December opened, the German Navy nudged the Foreign Ministry into action. On 6th December, Schniewind again reminded Raeder of the British proposal on battleship limitation and the need to conciliate the Italians "in view of the German-Italian conversations which should lead to a closer military link." It was proposed to invite Italian naval officers to Berlin to explain the German position to them. On 8th December Raeder saw Hitler, and on the 9th the Foreign Ministry was instructed to deliver the Note on submarines and 8-inch cruisers by 12th December. And on that day the German Note, as drafted in November, was delivered to the British Foreign Secretary, Lord Halifax, by Ambassador von Dirksen.

Lord Halifax's reaction was very disapproving, and the British reply of 14th December insisted that conversations should be held before the German intentions were put into action, "as I anticipate His Majesty's Government will be questioned as to the reasons for the German decision and as the Note under reference is necessarily somewhat general in character." In handing the British Note over, Lord Halifax expressed his disappointment at the deterioration in Anglo-German relations since Munich. "I thought that British feeling was by no means incorrectly described . . . as coming to feel that it was not possible to reach agreement with the

German Government, which seemed to us to make no response." These remarks, however, were not reported to Berlin by the German Ambassador.

On 16th December the British answer was discussed by Schniewind in the German Foreign Ministry. It was agreed that the talks could not be avoided, but the German Admiralty were determined not to add anything to what had been said already, and in particular they were determined not to allow their information on the progress of Soviet naval construction to be questioned. On 7th December the Italian Naval Attaché in Berlin was informed of the forthcoming talks, and Italian experts were invited to come to Berlin. On the 22nd, the British Government accepted a German invitation to send naval experts to Berlin. Their delegation included Admiral Sir Andrew Cunningham, of Mediterranean fame, the future victor of Taranto and Matapan. The talks took place in a very friendly atmosphere on 31st December, 1938, and effected nothing at all from the British point of view beyond vague German promises to set out their arguments in writing.

It is difficult to see how such talks could have produced any result which the British could have welcomed in view of the attitude of the German naval authorities. For during December the final details of the accelerated construction plan, later to be known as Plan Z, were being settled. The naval staff officers involved were far from happy about it. Its completion was only attainable by the "utmost burdening of all available shipyards and the fulfilment of the special measures of the Four-Year Plan (development of existing shipyards, attachment of further yards, machine shops, etc., training of an adequate corps of technicians, almost total abandonment of mercantile construction)." And it demanded a distinct lowering in the training period and quality of officers and crews to man the new ships. The draft received its final approval from Admiral Raeder on the day the British delegation opened the talks.

The talks with the Italians were equally ineffective. The Italians were unable to win their point about the desirability of a system of European limitation, though it meant inevitably that new British construction would out-class anything the Italians had available. According to a German intercept of a telephone conversation, the Italian delegation was satisfied with the talks, though it is difficult to understand why.

The one concrete promise that the British delegation had extracted from the negotiations was that the German Government would state its case more fully in writing. In fact the German Notes (of 18th January on the submarines, of 24th January on the multilateralizing of the exchange of information on building programmes, and of 14th February rejecting a system of European limitation on battleship displacement) merely repeated the arguments which had been previously advanced. In handing over the first Note, Counsellor Kordt of the German Embassy in London remarked, according to the British record of the conversation,

"he understood that the recent discussions in Berlin had been carried on in a very friendly manner and he was happy to say that the present communication met our point of view on certain points though not in regard to others. After reading the communication Sir Alexander Cadogan [the British Civil Servant interviewing Kordt] said that although his memory of the previous communication might be at fault he was not clear on what points it did meet us."

The British record closed with the ironic note that, after discussing two points on which no concession had been made, "Dr. Kordt was unable, or at least he omitted, to indicate to Sir Alexander any other points on which the Germans had met our point of view."

There was one point that was not so easy to clear up however. This was the German proposal for a change in the procedure by which the British gave advance notification of their naval strength. On 24th January Hitler gave instructions that this proposal was to be dropped. But when the German Naval Attaché in London was informed of this decision he replied, on 10th February, that the British were enquiring about this. Their attitude was stiffening, and if they did not get a reply they would assume from this that a prolongation of the treaty was questionable. Raeder called for an examination of the possibilities for legitimate construction within the 35 per cent. ratio remaining to Germany. The conclusion was that two of the four battleships to be laid down in 1940 would not be covered even in the most favourable case. On 24th March the German Embassy in London therefore delivered a Note saying that the German Government preferred to hold to the previous procedure. A month later, on 28th April, Hitler denounced the 1935 Agreement *in toto* and all but the qualitative terms of the 1937 Agreement.

As so often with Hitler, he gave both a plausible excuse and held out the hope of a substitute. The terms of his denunciation were based on Britain's offer to Poland and Rumania to guarantee their frontiers, and the policy of encircling Germany which allegedly inspired this. The British mulled this over for two months and then decided to test Hitler's sincerity. A long memorandum was presented by the British Ambassador to State Secretary Weizsäcker on 27th June, 1939, both criticizing the German denunciation and enquiring further into Hitler's conception of a substitute. Weizsäcker at once dispatched the memorandum to Hitler's headquarters, but it remained unanswered. Hitler was certain that Britain was bluffing. The British policy to line up the nations to resist further aggression on the one hand, and to offer Hitler the trade concessions and access to raw materials and markets which he demanded on the other hand, was only considered by Hitler as weakness.

In January, 1939, he had ordered that six new battleships should be ready by the end of 1944, instead of the four as formerly planned. In February the Plans and Operations Division in the German Naval War Staff drew up a table listing the priorities in warship construction; battleships and U-boats first, then a new form of light battle-cruiser "which will improve our strategic position at sea the most speedily." In March Hitler occupied the remains of Czechoslovakia and the port of Memel. On 23rd May he announced to his generals his intention of attacking Poland at the first opportunity that offered. June and July were spent in increasing pressure on the Poles and in coming to terms with the Russians. On 22nd August he summoned his generals and admirals to the Berghof, the high eyrie in the mountains he had built above Berchtesgaden, to tell them that the opportunity was at hand. He still did not believe that England and France would go to war. They were not ready, they were bluffing, he had struck the weapon of Russia from their hands.

On 1st September Hitler launched his Polish campaign; two days later England and France declared war. And the German Navy, despite all its efforts, was not ready for war on the high seas. The great battleships of the Z Plan were never built. Those that had already been laid down so hurriedly proved, in the light of the experience of 1939-40, to be unusable without major reconstruction, and were broken for scrap. The naval construction officers were left to plan monstrous unsinkable battleships of colossal proportions, 56,000 tons, 78,000 tons, 93,000 tons, and finally 112,000 tons, nightmare ships that never came off the artist's drawing board.

To sum up: the German naval authorities seem to have had little illusion from early on as to who was to be their ultimate enemy. If Germany was to be a world

power, then Britain must be defeated at sea. The political leadership imposed upon them the need of building up their Navy, of seeming to stay within the limits of existing naval treaties, and of not alarming Britain. The demands of this policy made it necessary for each major development in the reconstruction of German naval strength to become the subject of diplomatic negotiations with Britain, in which Germany inevitably appeared as the deliberate disturber of the previous *status quo*. Moreover, since the German Navy, should it be employed in war, could only really justify its existence in a war with Britain, its target was inevitably the British Navy. Yet the reasoning inspiring German naval development could hardly be avowed in negotiations with Britain. Failing this, the German naval negotiators were forced into relying on arguments about increases in Soviet naval strength of a necessarily unconvincing nature.

One thing is certain. The restrictions on German naval development were not those imposed by the demands of a policy of friendship with Britain. No vital German naval need was sacrificed on the altar of such a policy. The German Admiralty welcomed friendship with Britain so long as it did not impede the growth of the German Navy. But were the Navy to be employed in war, its enemy would obviously be Britain.

The final word can be left to Grand Admiral Raeder. On 3rd September, 1939, he wrote as follows :—

“ Today the war against France and England broke out, the war which according to the Führer's previous assertions, we had no need to expect before 1944. The Führer believed up to the last minute that it could be avoided even if this meant postponing a final settlement of the Polish question (the Führer made a statement to this effect in the presence of the Commander-in-Chief of the armed forces on the Obersalzberg on 22nd August).

“ At the turn of the year 1944-45 by when, according to the Führer's instructions, the Navy's Z Plan would have been completed, Germany could have begun a war against Great Britain with the following strength :—

For merchant warfare on the high seas

| | |
|--|---------------------|
| 3 fast battleships | |
| 3 reconverted pocket battleships | |
| 5 heavy cruisers | 2 aircraft carriers |
| About 190 U-boats, including 6 monitor U-boats, 6 fleet U-boats, | |
| 6 mine-laying U-boats. | |

“ Two groups each consisting of three of the heaviest diesel-powered battleships equipped with 40.6 cm. (16-inch) guns would have had the task of intercepting and destroying the heavy British forces which ‘ more or less dispersed ’ would pursue the German forces engaged in merchant warfare.

“ Two ships of the *Scharnhorst* and two of the *Tirpitz* class would have remained available in home waters to hold down some of the heavy British ships.

“ In this way, especially with the co-operation of Japan and Italy who would have held down a section of the British fleet, the prospect of defeating the British fleet and cutting off supplies, in other words of settling the British question conclusively, would have been good. . . .”

(Concluded)

THE ITALIAN CAMPAIGN OF 1796-97—II

By MAJOR E. W. SHEPPARD, O.B.E., M.C.

THE Directory's plan for the campaign of 1796 involved a main offensive in Germany by two armies under Moreau and Jourdan, combined with another subsidiary offensive by the Army of Italy. It was intended that these should be simultaneous; that the last-named force, after it had conquered Lombardy, should effect a junction with the armies in Germany through the passes of the Tyrol; and that all three should then move together upon Vienna to force the Austrian Government to sue for peace. The campaign in Italy was thus to be secondary to that in Germany and, in considering the course of Napoleon's operations, this fact must always be borne in mind.

The Directory's special instructions to Napoleon, the newly-appointed commander of the Army of Italy, laid down that the attack on the Austrian Army was to be undertaken first and the Piedmontese Army merely contained while it was in progress. Napoleon disagreed, as he considered it essential to dispose of the Piedmontese to prevent them threatening his flank and rear while his army was engaged with the Austrians, and finally the Directory gave him a free hand.

When he came to take over his new command in March, Napoleon found his army in a state of high morale after its successful operations in 1795, but also in great physical destitution, ill-clad, ill-shod, and short of food and supplies. His divisional commanders, all of whom had seen more active service than he had, at first felt no great confidence in him; but he quickly established his personal ascendancy both over them and over the troops, whose most urgent needs he managed to supply by the time he was ready to commence the offensive.

THE PLANS OF CAMPAIGN IN ITALY

Before he was appointed to his new command Napoleon had served on the staff of the Army of Italy and in the War Ministry in Paris in the section concerned with operations in that country. His plan of campaign for 1796 was the third of a series, the first two of which had been successfully executed by his predecessors in 1794 and 1795, so that he was working on a problem with which he was already familiar.

His basic ideas involved a powerful stroke at the point of junction of the inner flanks of the Allied armies in the region of the Cadibona gap through the Apennines, the repulse of the Austrians far enough northwards to prevent them assisting the Piedmontese, and a vigorous attack on the latter so as to force them quickly out of the war and leave him free to deal with the Austrians on equal terms. He had 37,000 men available to carry out these operations against the combined Allied strength of some 56,000 men (31,000 Austrians, 25,000 Piedmontese).

Marshal Beaulieu, the new Austrian commander, had formulated no such ambitious or definite plan of campaign. His mission was to mount a combined offensive with the Piedmontese to drive the French from the Riviera; but hardly had he taken over his command on 25th March, 1796, than he heard that French troops, ordered forward by Scherer before Napoleon's arrival, were advancing along the coastal road on Genoa, the occupation of which would not only enable them to supply all the needs of their army but place them in a favourable position to turn the whole Allied front in the Apennines and invade the Austrian province of Lombardy. Beaulieu decided to seize the opportunity to cut off this isolated force by an attack from the north through the Cadibona gap, and to begin preparations

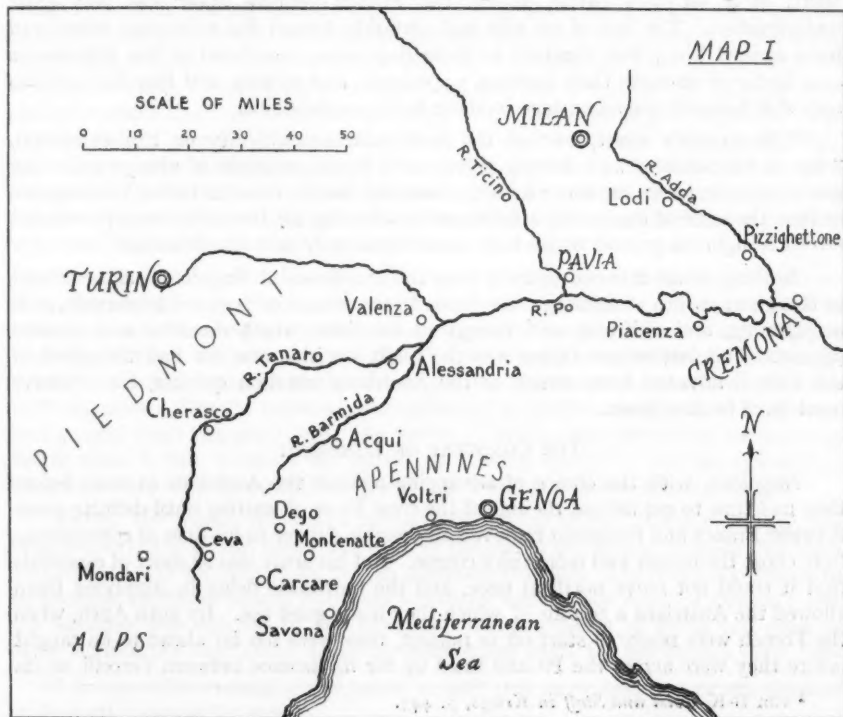
for the general offensive to follow. As at the same time Napoleon was about to begin his advance northwards through this same gap, the campaign of 1796 began with an unexpected encounter battle.

THE ELIMINATION OF PIEDMONT

It is not intended here to give a detailed narrative of the operations; for this the reader is referred to one or other of the larger histories. Here he will find only an outline of events followed by comments. As most historians have naturally enough described the campaign mainly from the French point of view, more attention than is usual will be paid to the Austrian side of the campaign.

The Austrian attack on the isolated French brigade advancing on Genoa was made in two separated columns, the one led by Beaulieu against its front and flank, and the second under Argenteau, by way of Montenotte, to cut in behind it and block its line of retreat. Napoleon, who had three divisions ready to move through the Cadibona gap, used one to counter-attack Argenteau's force in front and flank and despatched the other two to Carcare so as to block the most direct route of intercommunication between the Austrians and the Piedmontese. Argenteau's troops were defeated and fell back on the Austrian main body far to the north at Acqui, and Napoleon, leaving two divisions to follow them up, switched a third westward to attack the Piedmontese in the Ceva area, and called up his fourth division, which had been guarding the Apennine passes, to join in the offensive.

There was a short period of anxiety for him when this attack was held up by a small fortified post, and the Austrians, having been driven out of Dego, returned



unexpectedly and retook it. Beaulieu, however, confined himself to concentrating his widely dispersed troops at Acqui, well out of the danger area, and left the Austrian captors of Dego unsupported so that they had to evacuate it when the French moved against them in force.

As soon as Napoleon felt himself free from danger from the north he sent the greater part of the two divisions there to strike at the Piedmontese left. Colli and his troops put up a stout defence, falling back to successive positions and inflicting losses on the French whenever they stood to fight, but they were so heavily outnumbered (13,000 men to the French 24,000) that their resistance could not be prolonged. After a defeat at Mondovi and the loss of Cherasco, only two days' march from Turin, the capital of Piedmont, Colli asked for and obtained an armistice, which was signed on 28th April, less than a month after the opening of the campaign. By its terms Napoleon secured the surrender of the fortresses in southern Piedmont and the right to march his army through the country and to use the bridge across the Po at Valenza. The first phase of the Italian campaign thus ended with one of the two Allied armies eliminated from the scene and the other confronting the victorious and numerically superior French behind the line of the Po.

Napoleon had thus scored a brilliant and promising success which increased the confidence which his troops felt in him and he in himself. But this heightening of morale on the French side was not matched by any decline in that of his adversaries. To Beaulieu's way of thinking, all that had happened was that part of his troops had got the worst of a series of minor preliminary combats; his confidence in the result of a set-piece battle, should the French venture upon one, was quite undiminished. The loss of his ally had certainly turned the numerical balance of force against him; but numbers in those days were considered of less importance as a factor of strength than training, experience, and morale, and Beaulieu and his men still believed the advantage in these to be on their side.

"Bonaparte's merit," writes the best Austrian authority on this campaign, "lay in his boldness and driving power, and in his principle of always collecting much superior forces for every action. Beaulieu was in error in failing to recognize in time the scale of the hostile attacks and in allowing his troops to be surprised and forced to fight on ground where they could do so only at a disadvantage."¹

Nothing of all this can detract from the excellence of Napoleon's achievement in this short month of fighting. He showed rare powers of personal leadership, skill in planning, and swiftness and energy in execution which deserved and secured success. This last-named factor was the really decisive one, for had the speed of the French advance been slower or the Austrians' reaction quicker, his offensive must have broken down.

THE CONQUEST OF LOMBARDY

Napoleon, with the choice of advancing against the Austrians at once before they had time to get behind the line of the river Po or of waiting until definite peace between France and Piedmont removed all possible danger to his lines of communication, chose the former and more risky course. But his army was so short of essentials that it could not move north at once, and the inevitable delay in supplying them allowed the Austrians a respite of which they made good use. By 29th April, when the French were ready to start off in pursuit, they were too far ahead to be caught before they were across the Po and lined up for its defence between Vercelli, on its

¹ von B-K, *Geist und Stoff in Kriege*, p. 443.

northern tributary the Sesia, and Corte Olona, with the main strength facing Valenza, the bridge which the French were allowed to use under the terms of the armistice with Piedmont, and Valeggio. Beaulieu now had only 26,000 men as against the French 37,000, and his mission was to defend the Austrian province of the Milanese until reinforcements could reach him.

Napoleon, seeing that the enemy had for the moment escaped him, called the pursuit off and advanced by easy marches to the line of the Po from Valenza to Valeggio. The object of his next operations was not to defeat and destroy Beaulieu's army in the Milanese, though naturally he would seize any opportunity to do it all the damage possible; he merely aimed to compel it to evacuate the Milanese, the rich resources of which would enable him to supply the manifold and crippling deficiencies of his army and to secure a position which he could hold while waiting for the development of the main French offensive in Germany.

For this purpose he adopted a manœuvre typical of 18th century warfare, but carried out with an exceptional speed and vigour which compelled his adversary to abandon the line of the Po and retire from the Milanese for fear of being cut off from his base. Feinting to attempt a passage at Valenza by means of obvious and menacing preparations made by Serurier's and Massena's divisions, he despatched Augereau's and Laharpe's divisions, preceded by a fast moving advance guard of picked troops, to move rapidly to Piacenza, east of the Austrian left flank, and force a crossing there. But Beaulieu had already suspected Napoleon's design, and had ordered his main body to retire from the Po under cover of a flank guard. The army crossed the Adda, leaving behind a rearguard to hold the bridge at Lodi, and Napoleon halted the advance of his two forward divisions after they had crossed to the north bank of the Po until the rear two could come up to join them. Thus, by the time his army was united, the Austrian main force was well out of reach. The brilliant little action in which the French forced the bridge of Lodi, though of great effect on their morale and, if one may believe Napoleon, on his own,² was of little strategic importance; the Austrians retired behind the line of the Mincio and Napoleon abandoned the pursuit and moved his wearied but triumphant troops back to rest and refresh themselves in the captured territory of the Milanese, where the population welcomed them enthusiastically as liberators.

Shortly after Napoleon had entered Milan in triumph he received new instructions from the Directory in Paris. According to these he was with his own troops to undertake an offensive in central and southern Italy against Rome and Naples; while Kellermann, with his Army of the Alps, which had remained inactive throughout the campaign, took over the garrisoning of the Milanese and shared the command with Napoleon. But the latter at once protested against these orders: "Better one bad general than two good ones," he wrote. "Kellermann would do the business better than I, but together we should do it very badly"; and he offered the Directory his resignation which he knew they could not and would not accept.

During the week's rest which he had allowed his troops, Beaulieu's army had been reinforced to 28,000 men; but even so the line of the Mincio between Peschiera and Mantua was too long to be held in adequate strength. Leaving 5,000 troops to besiege the citadel of Milan, Napoleon advanced with 30,000 men via Brescia; but the offensive was delayed by the news that the population of Pavia had risen in arms against the exorbitant demands made upon them by the French civil com-

² It was on the evening of this battle, he said, that he realized that he was destined to do great things in the world.

missioners with the army and the indiscipline and plundering of the troops. As soon as order had been restored the offensive was renewed. While Augereau's division in the van of the army feinted towards the fortress of Peschiera, the other two swung south-eastwards and surprised the bridge of Borghetto. The whole army rapidly crossed there and swung northwards, driving the scattered Austrian forces before them up the road leading by the east side of Lake Garda into the Tyrol. With the expulsion of the Austrian field army from the Italian theatre, the second phase of the campaign came to an end.

CENTRAL ITALIAN INTERLUDE

This was followed by a pause in the operations. Napoleon felt he could advance no farther until he had freed his communications by the capture of Mantua and its strong garrison. The Austrian army in the Tyrol had to await 25,000 men sent to it from the Archduke Charles's army in Germany before it could again venture down into Italy. Napoleon therefore proceeded with half the army to invest Mantua and with the other half to carry out the operations in central Italy ordered by the Directory. Naples, the main supporter of the Pope, concluded an armistice with the French even before this offensive had started, and her defection left the Pope helpless and isolated. Augereau's troops advanced by Bologna to Ancona on the Adriatic coast, while one detachment seized Leghorn and another Genoa.

Within ten days of the commencement of the offensive the Pope asked for and was granted an armistice. The rulers of the small duchies of Parma, Modena, and Tuscany had already made peace with France, so that all Italy south of the Po had been reduced to terms by the end of June, a fortnight before Marshal Wurmser with his 25,000 men from Germany arrived at Trent to take over command of the Austrian Army of Italy. He was not ready to advance into Italy before the end of July, and this respite was utilized by the French to seize the Austrian and central Italian fortresses and to form an extemporized siege train. Napoleon now proceeded to press the siege of Mantua and disposed his main forces so as to cover the approaches to the fortress from east and north.

THE AUSTRIAN RELIEF OF MANTUA

The prolonged series of operations around Mantua, which lasted from July, 1796, to January, 1797, have been treated in a misleading manner by practically all historians since Clausewitz, a contemporary who wrote a few years after the campaign, because they have failed to relate their narratives to the course of events in the main theatre of war in Germany. It must be emphasized again that the Italian theatre was only a secondary one for both belligerents, and that the operations of the armies in Italy had to be closely co-ordinated with those of the main armies north of the Alps. These were, on the French side, the Army of the Rhine-Moselle under Moreau and of the Sambre-et-Meuse under Jourdan, and, on the Austrian side, the Army of Germany under the Archduke Charles, the best of the Imperial generals.

While Napoleon's army was gaining the series of victories described above, the main armies had not moved from the positions along the Rhine which they had occupied at the end of the campaigning season of 1795; indeed, there was an armistice between them until 1st June, when the despatch of Wurmser with 25,000 Austrian troops to Italy gave the French a numerical superiority which enabled them to take the offensive. They advanced on two widely separated lines, Jourdan's Army of the Sambre-et-Meuse by the valley of the Main towards Bohemia, and

Moreau's Army of the Rhine-Moselle through the Black Forest into the Danube valley and across that river into Bavaria.

It was with this latter force that the Army of Italy was to co-operate by moving into the Tyrol from the south and joining up with it as soon as its advance had opened up the passes leading from that province into Bavaria. But there was no point in its doing so for some weeks yet, even had it been possible to do so without eliminating the threat to its communications presented by the garrison of Mantua. As in the Austrian Government's view the decision of the campaign was to be settled in Germany, the main object of the operations in Italy was to keep the French there; and this would be achieved so long as Mantua held out. Wurmser was therefore given the task of forcing the French to abandon the siege of Mantua or, if that should not be possible, of bringing in supplies and reinforcements to prolong its resistance. The criticisms made by most historians of the methods used by him and the result of his operations have been misdirected because they have supposed that his purpose was to inflict a decisive defeat on the French and reconquer the territory lost to them in the earlier part of the campaign.

THE FIRST RELIEF OF MANTUA

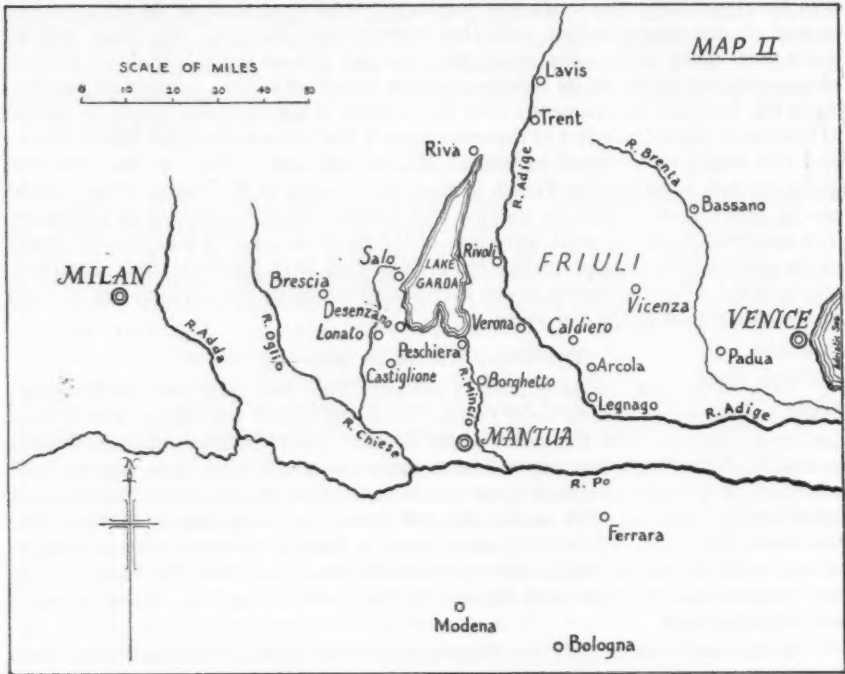
There were three possible lines of advance from the Tyrol into north-eastern Italy, one on either side of Lake Garda, down the Chiese and Adige, and a third farther to the east down the valley of the Brenta. Had Wurmser intended to fight a decisive battle with the whole French army he would have been wise to have advanced in force by one or other of these routes, keeping his army united and in hand for the purpose. But as his aim was merely to bring help to Mantua, this was more likely to be achieved by an advance in several widely separated columns, one of which at least should be able to elude the enemy and reach the fortress while his attention and energies were engaged by the others; and this, in fact, is what actually happened.

In the last week in July the Austrians advanced south from the Tyrol in two main columns, one under Quasdanovitch to the west of Lake Garda, and one under Wurmser himself to the east of it. On reaching the open country south of the Alps, these two split into smaller columns, some advancing on Mantua, others threatening the French line of communications thence to Milan.

Napoleon had disposed his army, which was inferior in numbers to that of his adversaries by some 7,000 men (43,000 against 50,000) so as to block the upper Adige and the upper Chiese valleys, to guard against an advance from the Tyrol along the line of the middle Adige south of Varona, and to block the routes through Friuli. The Austrian advance broke through the forward French formations on both sides of Lake Garda and forced them rapidly back, on the west to Desenzano and on the east beyond Rivoli, while the column sent to Brescia captured it with little resistance and their force in Friuli menaced the middle Adige.

Napoleon, unable at first to discern which of these various hostile attacks was the principal one, decided to counter-attack and drive back the force to the east of the lake; but while Augereau's and Despinos's troops were being massed for that purpose, he heard the news of the greater danger threatening to the west, and therefore changed his plan to deal with that first and to re-open his line of communications. All his forces were therefore ordered westwards for this purpose, leaving the road to Mantua open to Wurmser's columns. These arrived there on 3rd August; captured the enemy's abandoned siege guns, levelled their works, brought in supplies and reinforcements, and made the fortress capable of resistance for many months to come.

Indeed, Wurmser had come within reasonable distance of a greater success still, for Napoleon had seriously considered the possibility of abandoning the Mincio line and bringing his army back to the Adda, and only after discussing the matter at a



council of war with his generals did he resolve to attack and clear his line of communications. This was successfully done at the action of Lonato, and Quasdanovich, with only 18,000 men against the French 30,000, was forced back beyond Salò. Napoleon, thus relieved of all anxiety for his rear, was able to direct all his forces against Wurmser's main body, which had advanced towards the Mincio to Quasdanovich's assistance. In the well-contested action of Castiglione the French drove their enemy back up the Adige valley into the Tyrol.

THE ABORTIVE FRENCH OFFENSIVE AGAINST THE TYROL

Owing to the exhaustion of his army it was three weeks before Napoleon could comply with the French Government's instructions to invade the Tyrol at once so as to be able to co-operate with Moreau's Army of the Rhine-Moselle, now about to enter Bavaria; and meanwhile Wurmser had also reorganized his troops and was ready to meet them. Napoleon's and Wurmser's forces were about equal, rather over 40,000 each, and the latter divided his command into two corps, one of 20,000 under Davidovitch to block the direct routes on either side of Lake Garda, and another, rather stronger, under his own command, stationed in the Brenta valley east of Trent, on the flank of the French if they advanced against Davidovitch's corps. On 3rd September, Napoleon's main offensive began on the east of the Lake,

with a small flanking force to the west of it, 10,000 men being left behind to carry on the blockade of Mantua and to guard the line of communications and rear areas. Davidovitch's 20,000 men were found widely dispersed so as to cover all possible lines of approach; they could put up only a brief resistance against the twofold superiority of their assailants, and in a series of small engagements were driven northwards beyond Lavis.

Here Napoleon found himself in a quandary. He could not continue his northward march to join Moreau's army in Bavaria with the Austrian corps in the Brenta valley so close to his line of communications, and yet if he turned his army to deal with it, the chance of linking up with Moreau might be missed. But as he did not know exactly where the Army of the Rhine—Moselle was, he decided that the best course was to dispose of Wurmser's army by driving it down the Brenta valley far enough to prevent it interfering with his march into Bavaria.

Wurmser was better informed of the position there. He knew that the Archduke Charles was about to take advantage of the separation of the two French armies in Germany by attacking the more advanced of them, the Sambre-et-Meuse under Jourdan, the more enterprising of the two commanders, while leaving only a small force in Bavaria to contain Moreau's Rhine—Moselle. It was of vital importance to prevent the latter being reinforced by Napoleon's Army of Italy before the Archduke had defeated Jourdan's force and could return south to deal with Moreau's. Wurmser therefore took a bold decision; instead of endeavouring to check the advance of the French, his corps marched down the Brenta valley drawing them after it. The Austrians therefore hurried down the valley, shedding rearguards to hold off their pursuers, and emerged into the plain. Brushing past the small French force left behind to maintain the blockade of Mantua, they reinforced the garrison of the fortress and even managed to collect fresh supplies before the French surrounded them and shut them in. But the resulting prolongation of the resistance of Mantua was only a secondary result; the important thing was that the Archduke Charles in Germany had been left free to attack and defeat the Army of the Sambre-et-Meuse, drive it back to the Rhine, and return to compel the selfish and sluggish Moreau, who had done nothing to help his comrade, to retreat thither in his turn. The campaign in the main theatre of war thus ended in a complete victory for the Austrians, and Wurmser, by preventing the French Army of Italy from taking its allotted part in the campaign, had scored a strategical success which more than compensated for the tactical defeats suffered by his army as the price of it.

THE AUSTRIAN FAILURE TO RELIEVE MANTUA

By mid-September the general French plan of campaign for 1796 had broken down completely. In Germany, Jourdan's Army of Sambre-et-Meuse had been badly beaten and pressed back over the Rhine; Moreau's Army of Rhine-Moselle was in full retreat from Bavaria and in danger of being cut off before it could find safety behind that river; and the Army of Italy had been foiled in its attempt to cross the Alps into the Tyrol and join up with it. The Austrian's victory in the main theatre of war more than compensated for their loss of territory in Italy, and as in this southern theatre there were still three months of good campaigning weather, it was decided to make yet another attempt to break the blockade of Mantua. A force of 45,000 men, partly experienced troops from Germany, partly new recruits, was put under a new and energetic commander, Alvinzy, for this task.

The offensive took the form of a two-pronged advance, Davidovich with 18,000 men along the eastern side of Lake Garda, and Alvinzy with 28,000 men across the plain of Friuli towards the middle Adige. Napoleon was misled by false reports of transfers of troops from the first to the second of these two corps into believing that the main army was much stronger and the Tyrol force much weaker than was actually the case, and that the latter could be attacked with good chances of success before the former could launch its offensive.

This plan completely failed. Vaubois in the Tyrol found his troops, instead of numerically superior as he had been told to expect, out-numbered by nearly two to one, and they were badly defeated and driven back in disorder to Rivoli. Napoleon, on receipt of the news of this disaster, sent reinforcements from the Adige to reinforce Vaubois's shaken troops, but the Austrians had not followed them up closely so that they had time to rally and prepare to defend the Rivoli position.

On 12th November, as Alvinzy's main army was approaching the Adige along the Villanova—Verona high road, Napoleon launched Massena's division against his advance guard in an attack which was no more successful than Vaubois's offensive in the Tyrol had been. At the same time he learned that Wurmser, who had some 17,000 men in Mantua, was preparing for a sortie in force. It was a critical situation, for on both the Adige and the Tyrol sectors the out-numbered French troops were at a low ebb physically and morally after their prolonged exertions and recent defeats. Only heroic measures could avert disaster, and Napoleon decided to venture everything on a stroke at the rear of the main Austrian force in the brief interval of time before their Tyrol corps could resume its advance.

Massena's and Moreau's divisions moved to the area where a little stream, the Alpone, flowed into it from the north through a wide belt of marshy land traversed only by narrow roads carried on causeways; here only heads of columns could fight, as deployment was impossible, and superior numbers could not exercise their full effect. On 15th November, the French forced a crossing of the Adige and appeared on the Austrians' flank with a threat to cut into their rear and pin them in the narrow marshy triangle between the Alps, the Alpone, and the Adige. Here took place for the next three days a confused and strenuous battle in which both armies fought each other to a standstill; but by the evening of the 17th, the French had prevailed and Alvinzy's exhausted corps was in slow retreat eastwards in the direction of Vicenza. It was none too soon, for Davidovich's corps in the north had renewed its advance and pressed its adversaries back almost to Peschiera; but as soon as Davidovich heard of his chief's defeat, he drew off his troops safely back into the Tyrol. Alvinzy's first attempt to relieve Mantua thus failed after a most promising beginning; but it had been a 'close run thing,' as Wellington said of the battle of Waterloo.

The final Austrian offensive in June, 1797, was a more simple and straightforward operation. During the six weeks' pause before their casualties could be replaced and their units reorganized, the French were engaged in settling matters with the Pope, who was quickly compelled to sue for peace. By early January, Napoleon had his full force, some 37,000 in all, arrayed to cover the siege of Mantua, now in its last stages. Two divisions, under two new young leaders, held the roads on either side of Lake Garda, Rey's to the west at Salò, Joubert's to the east about Rivoli. Massena's division watched the upper Adige about Verona and Augereau's the lower course of the river as far east as Rovigo, while Serurier's held Mantua closely invested. Against these Alvinzy brought 42,000 men, but many of them were only

raw and inefficient levies ; 23,000 under his own command moving down the Adige valley from the Tyrol, while Provera with 14,000 crossed the plain of Friuli towards Verona and Legnago.

Provera's troops were the first to make contact on 8th January, and it was only on the 13th that Napoleon realized that their attack was the secondary one and that the main Austrian force was heading for Joubert's positions about Rivoli. Provera's thrusts however had not been pressed, so that Napoleon hurried in person to Rivoli, ordering the divisions of Rey and Massena to follow him at all speed. Their arrival would still give him only 23,000 men to Alvinzy's 28,000; but the Austrians were inferior in artillery and could not make use of their superior cavalry, while the French position was naturally strong and well entrenched. In the battle of 14th January Alvinzy planned a double envelopment of both the French flanks, but his attacks were badly co-ordinated and were repulsed one after another with heavy losses. The defeated force retreated in much disorder, leaving half of its 28,000 men behind on the field, most of them as prisoners.

None the less Provera's corps, profiting by the absence of the bulk of the French army, all but achieved the object of the operation, the relief of Mantua. It crossed the Adige by surprise at Legnago, brushed aside Augereau's division, and made for Mantua, the garrison of which stood ready for a sortie as soon as they appeared. Fortunately for the French Massena's division, which Napoleon had hurried off from Rivoli as soon as victory there was assured, arrived just in time to cut in between the two Austrian forces ; the sortie was held in check and Provera, attacked in front and rear, had to order his 17,000 men to lay down their arms. Three weeks later, on 2nd February, Wurmser and the garrison of Mantua marched out of the place with all the honours of war, having by their most creditable defence detained the French Army of Italy in front of its walls for eight months.

THE INVASION OF AUSTRIA

The final phase, the invasion of Austria by the victorious Army of Italy, can be only briefly narrated. The Archduke Charles, its new opponent, could not collect his forces in sufficient time to be able to put up effective resistance to its advance, which began in mid-March, 1797. The main force of four divisions, including one newly arrived from the German theatre under the future Marshal Bernadotte, advanced through Friuli across the Alps into Carinthia by way of the Isonzo valley to Villach, while a detached division under Joubert entered and occupied the Tyrol, and joined up with the main body by way of Brizen and the Pusterthal. The scattered Austrian forces could only delay this two-pronged advance, and within a month the Army of Italy had cleared Friuli, picked up Joubert's division at Villach, and advanced to the Semmering Pass whence its outposts had a distant view of the spires of Vienna in the Danube valley below them. The Austrian Government at this juncture proposed an armistice, fearing that the French would press on and capture the capital practically unopposed. Napoleon was glad to accept the proposals, for his army, isolated in the heart of Austria with a long and precarious line of communications, the guarding of which had reduced its strength from 80,000 to 30,000, had reached the limit of its range of offensive action and could hope for no more help from the two French armies in Germany which had only just effected their passage of the Rhine. The armistice was quickly followed by a treaty of peace. The Italian campaign of 1796-1797 thus came to a victorious end and with it the long six-years war between Republican France and the First Coalition. Napoleon was universally and rightly hailed as the commander who had the principal share in winning it.

COMMENTS

(1) *The French Operations.* The views usually held of Napoleon's conduct of the campaign of 1796 have inevitably been coloured by the fact that it was the first of a long series which revolutionized the art of war. But if it is considered in the light of what preceded it rather than of what followed it, there seems little about it which can be called novel, much less revolutionary. The manoeuvre on interior lines between the Austrian and Piedmontese armies can be paralleled by several similar ones of Frederick the Great, the turning movement which led to the Austrian evacuation of the Milanese by several operations of Marlborough in the War of the Spanish Succession, and the crossing of the Mincio by other operations of Turenne. The story of the long struggle for Mantua in particular, so unlike anything in Napoleon's subsequent career, might have come out of the annals of the wars of Louis XIV or of the Thirty Years War. It is only in the final phase of the campaign, the swift advance from Italy across the Alps into Carinthia, that we see a foreshadowing of the Napoleon of Austerlitz and Jena.

The really novel features of the 1796 campaign were not the form of the French operations but the energy and rapidity with which they were conducted. Napoleon's clear insight, wide forethought, and swiftness of decision enabled him to make fuller use than any of his contemporaries of the greater mobility and flexibility of his troops as compared with their adversaries. It was not the novelty of his army's manoeuvres but their vigour and rapidity which forestalled and nullified any possible counter measures and enabled him to retain the initiative throughout the campaign and to exploit his victories to the full. It must surely have been of this first of his essays in command that he was thinking when he propounded the oft quoted maxim, "The art of the elements of war are simple enough; it is all a matter of their execution in practice."

(2) *The Austrian Operations.*—Insufficient justice has usually been done to the Austrian commanders opposed to Napoleon because their side of the story has seldom been told, and they are usually regarded by historians merely as chopping blocks for Napoleon's all-conquering sword. Such a view does them less than justice. From the point of view of the Austrian High Command the campaign of 1796 was to be decided in Germany, and the main task of the Austrian armies in Italy was to prevent the operations there from adversely influencing those in the main theatre. This, though at the cost of heavy losses in personnel and territory, Beaulieu and Wurmser succeeded in doing, so that, though they lost every battle, on balance the strategic advantage of the campaign fell more on the Austrian side than on the French. The main Austrian mistake was to continue the attempt to relieve Mantua after the issue of the campaign in Germany had been decided. The forces which Alvinzy led to defeat at Arcola and Rivoli would, as it turned out, have been better used in holding the Tyrol and the Alpine passages into Carinthia in 1797; but they came so near to victory at Arcola that the policy might well have justified itself.

The campaign as a whole was a long and well-fought contest between two worthy and well-matched adversaries, and the ultimate French victory was by no means so inevitable as most historians make it appear. And indeed little merit is to be won by successes over inefficient armies led by incompetent generals, and such a view does an injustice not only to the talents of the Austrian commanders and the stubborn courage of their troops but also to the genius and valour of the young French general and his soldiers who had to fight so hard to overcome them.

THE DEVELOPMENT OF THE R.A.F. TECHNICAL BRANCH

By WING COMMANDER M. E. PULVERMACHER, M.A., A.M.I.E.E., R.A.F.

THE Royal Air Force exists solely to operate complicated machines in an inherently unstable and shifting medium where the least carelessness or technical failure in peace or war can bring sudden disaster. Therefore, like every other air force, it can never afford to sink into a state of lethargy or inefficiency as land forces sometimes do in peace-time, e.g. the Spanish Army in the late 18th century or the British Army before the Crimean War. Moreover, an air force, unlike an army, must be built around a small number of fighting men—the aircrew—backed up by the very much larger number of technical tradesmen who are needed to maintain the increasingly complicated aircraft, but who do not themselves go into action. Consequently the R.A.F. has always had to be far more technically minded than the other Services.

The importance of adequate technical knowledge was specifically recognized by Lord Trenchard. In his historic paper of 1919, on which the pre-war structure of the R.A.F. was based, he proposed that after they had completed four years' productive flying service, all officers holding permanent commissions would be required to select some technical subject, such as engines, navigation, wireless, in which they would then specialize. Short courses would be provided for those officers who wished to remain primarily on flying duties with just a superficial knowledge of their technical subject(s) and long courses for those who wished to become really expert in their chosen specialization. This scheme was adopted and, in addition, arrangements were later made whereby a few specialist officers each year could attend a University or could receive advanced post-graduate training at Farnborough or elsewhere.

The key point in this scheme, which helped to ensure its success and popularity, was that all these long-service officers belonged to the same branch, the General Duties Branch. In his paper Lord Trenchard had said that "technical knowledge will, *inter alia*, qualify an officer for selection for high command," and this policy was implemented by appointing all G.D. officers, including technical specialists, to a common list. Consequently technical specialization did not bar an officer from high command; he could concentrate on, say, engineering for several years and then return to Air Staff and command posts. Since the only separate branches were the medical, chaplain's, stores, and accountant branches, these G.D. officers had to undertake almost any duty, including flying, command, organization, administration, staff, and last but not least technical. In pre-war days the name 'General Duties' was a truly accurate one. This policy was successful and ensured that the detailed technical knowledge needed to assess new scientific developments, such as Sir Robert Watson-Watt's proposals for the early radar stations, was available among senior R.A.F. commanders.

This system worked very well as long as one man could reasonably hope to become a specialist in two fields, flying and technical. But by the late 1930s the time required to train and acquire the necessary experience in both fields was becoming excessive. The G.D. officer needed more and more time to master the problems involved in flying and to train for his operational duties, which were likewise becoming more specialized with the introduction of radar and ground control,

and the increased need for long-distance night-flying. At the same time technical equipment had become more complex, so that a thorough grounding in mathematics, physics, etc., followed by lengthy specialist training and experience, was necessary to enable him to become a competent signals, aero-engine, armament, or radar expert.

The specialist G.D. officer in consequence became over-burdened and, as a result of the frequent changes between flying and specialist duties, was failing to be either an efficient pilot or an efficient technologist, especially in the more junior ranks. It was therefore decided in 1939 that it was essential to have full-time technical officers, and a separate Technical Branch was ultimately formed in April, 1940. It was initially staffed largely by ex-G.D. specialists and by temporary wartime-only officers. Some of the more senior posts were filled by University professors, engineers, and research scientists who had left their normal work; many of the other posts were filled by commissioning both Regular technical senior non-commissioned officers, who had a wealth of practical knowledge to draw on, and University students in science or mathematics, who were allowed to complete their courses under the 'Hankey Scheme' before being given commissions in the Royal Air Force.

At the end of the war the future of the Technical Branch, and indeed whether it had any future as a separate branch, was an urgent question and so the usual solution of British democracy was adopted—a committee was set up. This was the famous Hill Committee, under Air Marshal Sir Roderic Hill, and its report largely determined the post-war structure of the Technical Branch and its position in the Royal Air Force.

First, the Committee strongly recommended that a separate Technical Branch should be retained. Next came the question of specialization as during the war there had been five separate sections: armament; engineering; electrical; signals; and signals (radar). In spite of the strong R.A.F. tradition against any sub-divisions within the Service, the Hill Committee recommended that some specialization was necessary but that there should be only three sections: armament; engineer (which would absorb the former electrical officer); and signals (which would include radar).

These three sections, armament, engineering, and signals, were intended to constitute the permanent post-war pattern, but the armament officer was soon profoundly affected by two complementary trends. First, both the actual quantity of explosives to be handled and also the number of different types of guns and bombs in the Royal Air Force decreased, owing to the decrease in the number of operational aircraft; and second, the weapons systems actually fitted in the aircraft became more and more complex. That is, instead of a simple optical gunsight and set of remotely-fired guns, the fighter pilot was now equipped with a complete weapons system comprising airborne radar or radar-ranging, an elaborate gyro-controlled gunsight, and perhaps a complicated computer which controlled the actual firing of the guns and which might also be linked to the auto-stabilizer or auto-pilot. A similar change occurred in bomber aircraft with the introduction of sophisticated radar bombsights and atomic weapons. The armament officer therefore had to have a good knowledge of electrics and hydraulics, as well as of guns, bombs, rockets, and orthodox armaments.

There was thus a considerable overlap between the sections and in 1954 it was decided to reorganize the Technical Branch into two sections only, electrical engineers and mechanical engineers. The former took over the whole of the signals

officers' responsibilities for air and ground radio and radar, the electrical aspects of armament, and also everything connected with aircraft electrical equipment; the latter took over the former engineer and armament officers' responsibilities, with the notable exception of electrical equipment.

However, in practice it was impossible to make a clear-cut division of responsibilities because of the growing complexity of aircraft equipment. For example, the simple float-arm petrol gauge has been superseded by a capacitor gauge which embodies a valve oscillator and amplifier, and by a fuel flowmeter which includes a binary counter to compute the total quantity of fuel used. Similarly, the earlier mechanically-coupled flying controls have been replaced by elaborate power-control systems which usually include some electronic devices and may even be completely electrical. Some of the basic flight instruments (artificial horizon, rate-of-climb indicator, turn-and-bank indicator, etc.) which have remained unchanged for many years are now being absorbed into a single flight-director system which includes a complex electronic computer unit. These examples can be multiplied indefinitely. Thus, electrical power and electronic equipment are now used throughout the aircraft and are invading areas which were formerly purely mechanical. The mechanical engineer must therefore have some knowledge of electrical theory and electronics, and equally the electrical engineer must have some knowledge of airframes and aero-engines so that he can appreciate the uses to which his electrical equipment is put.

Incidentally these titles of the new sections are really a minor stroke of genius, for they fit in admirably with the policy of the professional Institutions. For years the meaning of the word 'engineer' has been vague. It is used by everyone, from the experienced professional man, who can take charge of a major project such as Calder Hall, down to the individual craftsman or apprentice. Even the youth who mends punctures in a local garage calls himself an automobile engineer. In an effort to clarify the situation and to improve the status of the profession, the Institutions are endeavouring to popularize the use of the terms 'chartered engineer' or 'professional engineer' for their members and others who hold recognized qualifications. Hence the adoption of these new names for technical officers, whose training and responsibilities correspond generally to the fields covered by the Institution of Electrical Engineers and the Institution of Mechanical Engineers, has encouraged both Institutions to recognize Service training and experience as adequate qualifications for membership.

As soon as the Hill Committee's recommendations had been approved the problem arose of how the permanent post-war Technical Branch was to be manned. The obvious solution was based on the fact that the huge wartime organization had not yet been completely run-down, and permanent commissions were therefore granted to over 1,000 officers holding wartime temporary commissions. This 'obvious' solution was easy, simple, and speedy, but it had two serious weaknesses which have affected the Technical Branch ever since. First, only a few of these officers possessed professional qualifications or had received formal training to that standard; and second, their ages were such that the post-war Technical Branch started off with a most unbalanced age-structure. In addition, many of the pre-war G.D. specialists who had been employed on technical duties during the war were transferred to the Technical Branch, and in fact the higher posts were nearly all filled from this source as these were the only officers with the necessary training and experience. Finally a large number of other wartime officers were granted extended service commissions for two, three, or four years, and these filled many of the junior

posts where they played an invaluable part in the final post-war run-down of the Royal Air Force.

This solved the immediate problem, but it was obvious that it was only a temporary solution and that it would be necessary to obtain a large annual intake of young officers, including both long-service officers who intended to make their whole career in the Royal Air Force and short service officers who would be able to fill the many junior posts on stations.

It was clear that the full career officers would need an excellent technical background and so it was decided that permanent commissions should be offered each year to suitable University graduates. At the time it was a bold move, since it was then general policy for all officers to serve in the ranks before being commissioned. Unfortunately this scheme failed, and instead of several dozen entrants every year only a few University graduates were granted permanent commissions in the six years between 1947 and 1952. This can readily be confirmed by a glance at the Air Force List, in which almost all the very junior technical officers are annotated as holding a National Service or Short Service commission. Thus the requirement for a steady intake of full career officers was not being met, and by 1952 it was apparent that the Branch would die of anaemia unless something drastic was done. Accordingly the Technical Cadet scheme was instituted in 1952 at the Royal Air Force Technical College. This had been formed at Henlow, Bedfordshire, in 1949 as a centre for the training of all technical officers, and the College provided then, as it still does today, a wide variety of courses, including both *ab initio* courses and specialist courses, at post-graduate level, in armament, guided weapons, etc. It was indeed the logical location for technical cadet training, as the basic facilities had existed there since the 1920's when the Trenchard G.D. engineer specialists were trained at Henlow on the Officers' Engineering Course. So the Royal Air Force Technical College now performs the same function for the Technical Branch as the Royal Air Force College at Cranwell, which had been founded in 1920, does for the General Duties Branch.

On entry technical cadets are usually between 17 and 19½ years, and must have advanced level G.C.E. in pure and applied mathematics and physics when they arrive at Henlow. About half of each entry spends one year at the Technical College and then goes on to a University. After they have taken an engineering degree, they return to Henlow for a short period of further training designed to supplement their academic background and fit them for service on an operational station. The other half of each entry carries out the whole of its training, which lasts some three and a half years, at Henlow. These latter cadets do not obtain a degree; but the Royal Air Force Technical College is recognized by both the Ministry of Education and the professional engineering Institutions, so these cadets can qualify for a Higher National Diploma and for membership of the appropriate Institution. This recognition has one advantage in that it provides the ex-cadets with accepted civilian qualifications that can be of great value when they find themselves working on new R.A.F. equipment with civilian scientists in industry or at Ministry of Supply establishments. It is hoped that in time nearly all the long-service officers in the Technical Branch will possess recognized professional qualifications.

The Technical Cadet scheme is proving most successful. As half of the officers produced by the scheme will have had a University training and half a Technical College training, the next 10 or 15 years will provide an excellent opportunity for assessing the value to the R.A.F. of these two kinds of background.

There is now good reason to hope that the Cadet scheme will largely solve the problem of providing officers who will ultimately be suitable for high rank. However, the problem of finding sufficient officers for the junior posts still remains because, like nearly all armed forces, the Royal Air Force requires a large number of junior officers who cannot possibly be offered a full career, since after all there must be far more subalterns than general officers in any rationally organized army or air force.

These junior officers have so far been obtained in two ways ; first by granting National Service and Short Service commissions to officers with suitable civilian qualifications ; and secondly by the introduction of the Branch List scheme. The successful manner in which commissioned ex-airmen had carried out technical duties during the war was not forgotten and so it was decided to revive this wartime policy, which was itself only a continuation of the pre-war scheme for commissioning warrant officers for limited employment on stations and maintenance units. Accordingly, suitable senior non-commissioned officers are given permanent commissions in the Branch List, which means that they will usually not rise above the rank of flight lieutenant but that they can serve until the age of 55. This scheme applies to most branches in the Royal Air Force and similar schemes exist in the Navy and in the Army.

It is clear, therefore, that the Technical Branch has drawn its officers from many different sources and has already gone a long way towards satisfying its needs for a relatively few highly qualified officers who are suitable for special and senior appointments, and for a large number of generally knowledgeable and experienced officers who will fill the many junior posts.

The main responsibilities of the Technical Branch have not changed much since its formation, and are briefly :—

- (a) Maintenance of all types of Royal Air Force equipment.
- (b) Research and development on this equipment.
- (c) Technical planning and advice to the Air Staff on the use, limitations, and potentialities of technical equipment.
- (d) Technical training.

Many of the duties arising from these responsibilities are carried out in collaboration with industry, research establishments, Universities, and Government departments ; and so technical officers may be detached from the Royal Air Force to such special posts for some years.

Now, in spite of their importance to the Technical Branch, the changes made as a result of the Hill Committee's deliberations were only a few among the many other changes made at the end of the war ; among these was the general introduction of planned flying and planned servicing. Before the war the servicing of aircraft was organized on a squadron basis. A given airfield might house two, three, or more squadrons, each having sufficient technical staff for its own minor servicing and only calling on the station facilities for help with major repairs. This was a wasteful use of the man-power available, as was discovered during the war. In 1942, Coastal Command were unable to meet their commitments because of the shortage of aircraft, and could not obtain reinforcements. Accordingly, an investigation was carried out by the Command Operational Research Section, which recommended a large measure of centralized servicing. The responsibility for this was transferred from the squadron commanders to the senior technical officer on the station, who could organize servicing more efficiently and more on a 'production line' basis. Without any

increase in the number of aircraft in the Command, this scheme raised considerably the number of serviceable aircraft available for operations each day. This system of centralized servicing, aided by time and motion study of certain routine tasks, was introduced generally after the war and is still in use today. As a result the Senior Technical Officer of a station became a much more important person, since he had to organize the servicing to meet the Air Staff requirement.

At the same time, the R.A.F. adopted a 'three-prong' system of organization. Under this, each station is divided into three wings: a flying wing, under O.C. Flying; a technical wing, under the Senior Technical Officer (S.T.O.); and an administrative wing, under the Senior Administrative Officer (S.Ad.O.). At Headquarters, the staffs are similarly split into three sections under the Senior Air Staff Officer (S.A.S.O.), the Senior Technical Staff Officer (S.T.S.O.), and the Air Officer i/c Administration (A.O.A.).

On an operational station the duties of the S.T.O. and S.Ad.O. are to provide the O.C. Flying with the aircraft and services he needs to fulfil the station's flying commitment, and therefore the latter's requirements are, quite rightly, paramount. Similarly, the Air Council, the Commanders-in-Chief, and most of their senior staff must have had flying experience so that they can assess what aircraft and aircrew can and cannot do and also so that they can appreciate the problems involved in air fighting. Moreover, it would be difficult for any commander to order aircrew up to fight, often against heavy opposition, unless he himself had taken similar risks at some time. For these reasons most command and operational posts are held by General Duties officers and the number of senior posts available to technical officers is therefore limited. The head of the Technical Branch, the Controller of Engineering and Equipment, an air marshal, is not a member of the Air Council and there are only 40 Technical Branch Air Officers whereas there are some 143 G.D. Air Officers. However there are also fewer technical officers than G.D. officers, so the individual prospects of promotion are not nearly so uneven as this comparison might suggest! Exactly the same sort of thing operates of course in other organizations: naval Commanders-in-Chief are executive officers, not engineers; in the Merchant Service the Commodore of the P. & O. or Cunard Lines is a deck officer, not an engineer or purser; and in industry accountants, administrators, and sales executives, rather than works managers or technologists, tend to be elected to the Board.

As might be expected, this situation gives rise to some rivalry between the two branches and, for example, it is often suggested that the Technical Branch should have direct representation on the Air Council, as it did at one time when there was an Air Member for Technical Services. Although such rivalry could present a problem, it may even be advantageous as it can act as a spur by making the technical officer keen to meet all the demands of the operational staff and so maintain the reputation of his branch.

Although the Technical Branch is today in a reasonably healthy condition its future is overshadowed by two major question marks; National Service and guided weapons. Many junior posts are at present filled by officers holding National Service or Short Service commissions. The Government has stated that National Service is to be abolished by 1962, and if this is achieved not only will all the National Service officers disappear but also many of the Short Service officers, since a large proportion of these only apply for Short Service commissions because the terms of service are more favourable than the National Service engagement which they would

otherwise have to accept. The abolition of National Service will be accompanied by a large decrease in the total strength of the Royal Air Force, but even so the loss of so many junior officers must present a very difficult manning problem.

The other problem, the effect of guided weapons on the Royal Air Force, is even more difficult to assess accurately because of the security restrictions which cover the development of British guided weapons. It seems possible that British missiles are lagging behind those of Russia and America, both of whom have guided missiles already in operational use. This is probably due to our limited resources and the national shortage of technical personnel (especially top-grade staff). But despite all the past delays British or American guided weapons should soon be issued to the Services, and in a few years' time, Bomber and Fighter Commands will be equipped with guided weapons as well as with manned aircraft. It has been stated that the present generation of aircraft—the V-bombers and the P-1 fighter—will be the last manned aircraft to be developed for these Commands, so in eight or 10 years they may well be using guided weapons only. This change-over is bound to have a profound effect on the Royal Air Force, and not least on the Technical Branch.

It must be emphasized that this change will not occur in the immediate future, when manned fighters and bombers will operate alongside surface-to-air and surface-to-surface guided weapons. Furthermore, even when unmanned missiles do supersede manned aircraft in Bomber and Fighter Commands, there will unquestionably be a continuing need for manned aircraft for transport and communications, and possibly also for reconnaissance, maritime and tactical operations, and small-scale fighting in local wars. Hence the Royal Air Force will certainly continue to operate manned aircraft as well as guided weapons.

Now, when offensive or defensive operations are carried out with manned aircraft, the numerous tactical decisions, such as the type and direction of attacks against enemy aircraft, the correct instant for opening fire, and the number of aircraft to be used, are usually made by the commander, by members of his staff, or by the pilot. But when guided weapons are used the position may be somewhat different. The performance and limitations of a specific missile against a particular target are usually known in detail, and it seems probable that many of the tactical problems, which in the case of manned aircraft are left to the pilot's judgment, could be solved beforehand with the aid of computers and simulators.

It is therefore conceivable that the only operational decision necessary for both ground-to-air and ground-to-ground missiles would be whether or not to fire, as everything else (angle and direction of firing, exact time of firing, optimum number of missiles, etc.) could be settled by use of the appropriate computers. In addition, it is obviously necessary that, just as a present-day commander must have adequate knowledge and experience of manned aircraft, so the commanders of a guided weapons force must be familiar with the performance, technical problems, limitations, and potentialities of their missiles; and in order to possess this familiarity adequate technical knowledge will be essential. If this is correct, then aircrew experience may not in future be essential for all staff and command posts, as technical knowledge and experience would be at least as valuable a background for dealing with guided weapons.

Now at this point it is desirable to notice another change which has occurred in the last 15 years. Before the war Lord Trenchard's concept of a General Duties officer, who was literally suitable for general duties and who could fill almost any kind of post, was satisfied by the long-service G.D. officer. However, this is today

no longer a true picture of the modern aircrew officer. There are now 18 different branches in the Royal Air Force, and aircrew duties themselves have become highly specialized. It is very difficult for a pilot to change from, say, the V-bomber force to a night fighter squadron. Therefore, the modern General Duties officer is compelled to specialize, and his employment is largely confined to flying, staff, organization, and command posts.

As more and more guided weapons come into use it may be necessary to reconsider the structure of the Royal Air Force. As suggested above the modern pilot is becoming a specialist in flying some particular class of aircraft, just as the technical officer is a specialist in some field of technology; but each may be equally capable of filling the higher command posts in a Service depending on guided weapons for its main offensive and defensive effort. One possible reorganization would be to continue the present system of specialist training and employment for flying and technical officers up to, say, the rank of squadron leader. But above that, all officers could be placed on a common list, possibly after a suitable integrating course, and be equally eligible for promotion and for command. It is worth noting that precedents do exist for such a scheme. In 1902 the Admiralty, faced with the strong rivalry between the executive and engineer officers, introduced a similar system. Under this scheme, the first part of their initial training was common to officers of both branches. They were then separated for their specialist training and placed on different lists during their subsequent employment as deck officers or engineers. But when they reached the rank of commander they were reappointed to a common list on which they would be equally eligible for promotion and command. Unfortunately the outbreak of the first World War led to the abandonment of this system, and the rivalry between the two branches continued. Also, in the Army, officers of all arms (infantry, cavalry, armour, gunners, or engineers) are in fact appointed to a common list when they reach the rank of colonel. Under this system integration will occur later than in the naval scheme. But it does occur and it does show that such a system is practicable.

But whether or not a scheme of this kind is adopted, there can be no doubt that technically qualified and knowledgeable officers will be ever more and more in demand for the operation and maintenance of guided weapons. This must lead to some shift in emphasis on the relative importance of aircrew and technical experience; and the Technical Branch will become a more active partner in the control of the Royal Air Force. Some such integration would seem to be almost overdue.

THE INTERNATIONAL SITUATION¹

By A. K. CHESTERTON, M.C.

GENERAL

IT is now almost certain that the main reason for the Prime Minister's visit to the United States was to assist in the process of integrating the Western economies. Chiefly, at the present stage of preparation, this consists of a firmer centralized international control of financial policy. Some months ago Sir Oliver Franks spoke of the need for a 'super bank,' and there is reason to suppose that the annual meeting of the World Bank and the International Monetary Fund, to be held later in the year at New Delhi, will be used for the furtherance of such projects. The popular interpretation of the move will no doubt stress the need for vast development programmes and of the need to 'contain' the Soviet Union by measures on the economic front, precisely as the West claims to have contained the Soviet Union on the military front.

We should not ignore the political implications of economic integration as it will affect our own national interests. There is little evidence that military integration within the North Atlantic Treaty Organization has yet done much to redress the imbalance of power in Europe—last month General Jean Vallery, Commander-in-Chief of the Allied Forces in Central Europe, declared that the armies under his command are too undermanned to meet the challenge of 50 Soviet divisions poised behind the Iron Curtain—but N.A.T.O. has succeeded to a large extent in placing national forces under foreign control and to have determined each nation's particular role on the seas, on land, and in the air. That is possibly the undeclared purpose for which it was created. In the same way it would be optimistic to believe that economic integration would make us any richer or our economies any the more stable, but it would have the effect of giving foreigners a voice in the regulation of our financial, industrial, and commercial affairs. It is difficult to understand the mentality of those who hold that such a consummation is devoutly to be wished.

DISARMAMENT AND CONTROL

Field-Marshal Viscount Montgomery said recently that "Europe is now the area where the danger is least." At the time of the Berlin air lift the European situation seemed full of hazards, but if real danger beset us on any other occasion our leaders must have taken good care not to apprise us of the fact. That is why the clamour for summit conferences and for international inspection and control of armaments does not ring true. We have been compelled for 13 years to live in an atmosphere of crisis, while the crisis itself has consisted almost entirely of shadow-fighting. Both East and West have engaged with zest in this peculiar pastime, almost certainly so that each could use the other as a bogey while the dominant partner on each side strengthened its control over its own set of satellites—or, if the term be preferred, junior partners.

After the spate of talk there has been on disarmament and international supervision, Mr. Khrushchev revealed how little reality there was in the discussions when, speaking to a Soviet-Czechoslovak meeting a few days ago, he accused the West of trying to wreck disarmament by insisting on control first. "How can one seriously

¹ As deduced from reports up to 17th July. Any opinions expressed in this article are those of the author alone and do not necessarily reflect official policy or the views of the Council of the Institution.

suggest," he said, "that in the present situation, when there is not even a minimum of trust and confidence, it is possible to begin with the establishment of thorough control and inspection as the first step? To try to establish control without confidence would not be control but reconnaissance, to find the opponent's vulnerable points with a view to aggression." The Soviet leader added, somewhat naively: "As we are not thinking of aggression, we do not need such control." The idea that Mr. Khrushchev would accept such control if he and his colleagues were indeed thinking of aggression is a humorous one. Even so, the evidence of the last dozen years supports his contention that Moscow, while endeavouring to subvert the world, does not contemplate embarking on military ventures. The contrary suggestion is planted in our minds and kept watered possibly to make us amenable to the progressive surrender of our national sovereignty in defence of freedom assailed from quite a different quarter.

FRANCE AND GENERAL DE GAULLE

General de Gaulle has established his regime first by accommodating many of the politicians he displaced and then by promoting and honouring the generals who revolted against them. National unity based on such disparate elements must necessarily appear problematical and precarious. The first big test will be in the autumn, when General de Gaulle has promised to produce a new constitution. It will define the future of Algeria and perhaps set forth proposals for coping with what for long has been France's own chaotic lack of political stability. This much accepted, if it be accepted, the French leader will feel free to reach towards his next objective, which is believed to be some variant of the Western Mediterranean Federation advocated by Mr. Foster Dulles.

MIDDLE EAST

LEBANON AND JORDAN

Almost immediately after the news of the revolt in Iraq became known the United States began to land a large force of Marines on the outskirts of Beirut, and there was soon a colossal concentration of ships of the United States Sixth Fleet in Lebanese waters. The assistance of United States forces had been requested by the President of the Lebanon. Three days later King Hussein publicly invited American and British intervention. In response, 2,000 British paratroops were flown into the country. The speed with which both operations were undertaken suggests that they had been long contemplated and prepared.

This makes the more surprising the apparent inertia of the West in the face of the explosion in Iraq. Either the build-up of forces in Lebanon and Jordan is the preliminary to an advance on Iraq or, it would seem, the rush to assist Jordan and the Lebanon is a move to divert attention from the Iraqi revolt. At any rate, at the precise moment in time when these lines are being written, the effect is that of a diversion. An agency report states that on Wednesday evening (about 60 hours after the outbreak of the revolt) the British Ambassador in Bagdad held talks with the leader of the new régime, Brigadier Kassem, and was 'satisfied' with them. The agency added that the talks were held in an atmosphere of 'friendship and understanding.' If these matters have since become clarified, the reader out of his charity will perhaps show a sympathetic insight into the present writer's perplexity in surveying such meagre information as is at present available to him.

There are other mysterious factors still to be explained. A group of United Nations observers, after three weeks spent in keeping a sporadic watch on the frontiers of the Lebanon, reported that there had been no substantial infiltration of men and supplies from Syria. As the complaint was of infiltration by night, and as this was the time when the watchers took to their beds, it is difficult to understand why there should have been even a pretence of mounting guard. The further knowledge that during the relevant period the observers had access to only a tiny frontier area makes the whole thing fantastic.

The United States intervention was based on the assumption that the American Intelligence services had a better knowledge of what was going on than had the United Nations observers, only two or three of whom spoke Arabic. No doubt the assumption was correct. But if the U.S. Secret Service was so alert in the Lebanon, is there any reason to suppose it was less alert in Iraq? I find it difficult to believe that the revolt came as a bolt from the blue. What, then, is the exact nature of the game, if so gruesome a business can be called a game? The moral for the British nation at any rate is clear. Whatever it does, in defence of its legitimate interests, in the company of the French is wrong. Whatever it does, in defence of interests not specifically its own, in the company of the Americans is right. Now we know.

CYPRUS

The British plan for Cyprus was a strange conception and the circumstances in which it was introduced to the world were even stranger. One would have thought that a Government, before presenting its solution to any problem, would have made sure that it met with some measure of consent from the other participants. The Governor of Cyprus, however, said that it was never expected that the British plan would be accepted. That, he claimed, was the beauty of it. He went so far as to describe the certainty of its rejection as revealing a 'touch of genius' in those who drew it up, because if one side welcomed the plan the attitude of the other side would harden. Such reasoning, to say the least, is difficult to follow.

What is certain is that the Turkish Cypriots, for so long loyal to the administration, have decided as a result of the new 'liberal' policy to defend themselves against the aggressions of the Greek Cypriots. And in as far as this has brought them into conflict with the authorities, the result has been to make them decidedly less pro-British than they were. The British Government's willingness to negotiate with Makarios, and the Governor's approach to the terrorist Grivas, have made the Turks apprehensive of the rule under which they were once well content. The objection to the plan from a British point of view is that it offers to share sovereignty of the island with foreign Governments. Another objection is that the plan allows Cypriots to become Greek or Turkish citizens without losing their status as British subjects. How, argue the objectors, can allegiance carry any meaning under a dispensation of that kind?

ADEN AND THE YEMEN

The British Government has withdrawn recognition from the Sultan of Lahej, Sir Ali bin Abdul al Karim, and has for the time being banned him from the territory and from the Aden Colony and Protectorate. Its charge against him, as outlined by the Secretary of State for the Colonies, is that he has for long been pursuing a course of action incompatible with the treaties between him and the Government. He has failed in a certain matter to co-operate with the Governor of Aden, and the Colonial

Office was convinced that he "has had forbidden political contacts without the prior knowledge or sanction of the Government, and that in all the circumstances he must have had advance knowledge of, and connived at, the recent defection to the Yemen of the Commandant of the Lahej state forces together with part of those forces."

While this complaint was being levied against the Sultan of Lahej, other rulers have been in London to make a complaint of quite a different kind to and against the British Government. They are the Emir of Dhala, the Sharif of Beihan, and the Sultan of Fadhli, and they hold that Great Britain has not fulfilled all her treaty obligations in defending the Protectorate against Yemen encroachment and subversion. They have asked for troops to be sent to Dhala and Beihan. The Sharif of Beihan had previously issued a statement in Aden in which he said: "I am not satisfied with military action just taken here by the British. It is weak and insufficient. I asked the Government here to do as the Yemen does and go into their country in the same way that they invade us, but the only response has been defensive action. The Yemen today is a great aggressive danger, because we are no longer facing them only, but Egypt, Syria, and Russia as well. The Yemenis and their friends have completed their preparations for a real war. Our States have treaties with the British Government, who have promised on their honour to protect us. These treaties were concluded long before the United Nations existed and our confidence is not in the United Nations, anyway, but in the British Government." The complaint seems to be only too well founded.

The case for stronger action against the Yemen was also stated in forthright terms by the Sultan of Avdhali State, who said: "I have no means of closing the frontier. The trouble is always there, and whenever action is taken by the British it is always late and insufficient. Whatever action the Yemen takes we should take too, and invade them as they invade us. It is the only thing they understand."

There has never appeared to be the remotest chance that the British Government would take action against the Yemen by sending a punitive expedition into the country, which is what the rulers of the Aden Territories obviously think should be done. Instead comes the curious news that a senior official of the Aden Government has flown to Diredawa in Abyssinia for talks with Yemeni officials. If there is one thing certain it is that Yemen's sole intent is to get the British out of Aden Colony and Protectorate. Why, then, the conference? An agency message from Aden reports that it has taken place as the result of the initiative of the United States. It seems that there is about to be retraced a pattern which has become sickeningly familiar.

THE FAR EAST

It was only a matter of time after the withdrawal of the British administration from Ceylon before the Tamils were made the victims of communal violence on a mass scale. The savagery used against them was appalling. No wonder they are demanding the creation of a Tamil State to be "a distinct and separate Dominion of the British Commonwealth owing allegiance to Her Majesty the Queen." Unless the British peoples stop their long retreat and begin their counter-offensive, demands such as those of the Tamils (and their sentiments must be shared by millions in Malaya, Singapore, Burma, West Africa, and elsewhere) will amount to nothing more than pathetic dreams. The mistake of the Tamils, as of many others, was not to recognise the sterling worth of the British before it was too late.

Having terrorised the Tamils, Sinhalese nationalists have now begun a war of nerves against British residents. They declare that unless all the British quit the country by 31st December of this year they will be killed. As the impotence of the Banderanaikie Government was demonstrated during the outbreaks against the Tamil population, Britons in Ceylon can have little faith that they will be protected in the event of the mobs being incited to attack them. Many of them will doubtless follow the example of former Dutch inhabitants of Indonesia and clear out. The paramount need is for the British Government to demonstrate that those who threaten the lives of Britons anywhere do so at their peril.

MALAYA AND SINGAPORE

The Malayan Government reports that since independence was granted in August of last year 304 Communist terrorists have taken advantage of the amnesty offer. Those still operating in the jungle are said to number about 1,300. It would be optimistic, perhaps, to suppose that the terrorists who have surrendered are changed men. A special correspondent of *The Daily Telegraph* reports that he found the latest batch seated under trees, having tea and cakes "rather like guests at a vicarage garden party." When questioned by the Press they became violently abusive. "They are very sensitive," said a Special Branch officer who had obviously lost control of the situation. He described them as "surrendered personnel," while another officer said, "We must not hurt their feelings." The sensibilities of thugs and murderers are about the only feelings which are taken into account in this strange new world which we inhabit.

Singapore, however, is not now as happy about its blessedness as it was 18 months ago when Mr. Lim Yew Hock, its Chief Minister, solemnly declared that there was no terrorism whatever in the city. A special commission has reported on widespread electoral malpractice, including intimidation of electors by secret societies, and as a result the Singapore Government has armed itself and its courts with formidable powers, including the right to inflict the whip and long terms of imprisonment on those found guilty of terrorising electors and similar offences. "Children grow up," Mr. Lim Yew Hock told me when he was demanding self government from the Colonial Office. The 'children' of Singapore seem to take an interminable time in so doing!

NORTH AMERICA

In spite of reassuring communiqués, the recent visit to Canada of the President of the United States was far from being a joyous popular occasion. Canadian resentment of American trade policy did not promise a favourable climate of opinion, and when the 20 gunmen who formed the President's bodyguard searched the official residences of the Governor-General and of the Prime Minister the feelings of Canadians were better imagined than described. Nor did the President's implied criticism of the proposal to divert to Great Britain 15 per cent. of Canada's trade with the United States help to restore matters.

However, use was made of the visit to announce the formation of a joint defence committee at Cabinet level, and there was also mooted a suggestion that there should be a joint U.S.-Canadian parliamentary body. Now that Alaska has become the 49th State, there are many who think that 50 is a good round number. Canadians in their present mood would not countenance any such idea, but it is remarkable what modern propaganda can achieve in a very short time. What will Canadians think of it five years hence? Much will depend upon the ability of the British peoples all over the world to regain their proper pride.

CORRESPONDENCE

(Correspondence is invited on subjects which have been dealt with in the JOURNAL, or which are of general interest to the Services. Correspondents are requested to put their views as concisely as possible, but publication of letters will be dependent on the space available in each number of the JOURNAL.—EDITOR.)

THE SCHLIEFFEN PLAN

To the Editor of the R.U.S.I. JOURNAL.

SIR,—The English translation of Gerhard Ritter's book on Schlieffen's Plan (Wolff, London, 1958), with a foreword by Captain Liddell Hart, gives an impression so directly contrary to my articles on the subject in the last three numbers of your JOURNAL that it calls for an answer. Herr Ritter claims to have discovered that the plan was "never a sound formula for victory," and was doomed to failure from the start. He produces no fresh evidence for his claim and ignores the exhaustive research summarized in the German official history (Vol. I, 1925) which, with the original plan at its disposal, came to a contrary conclusion. He ignores, too, the testimony of the younger Moltke who carried out the plan, that it would probably have succeeded if he had not made a hash of it; among other crippling mistakes he admits that the German defeat on the Marne in September, 1914, was the revenge for having sent away two German corps from France to the Russian front too soon. Herr Ritter is a professor of political history, and the chief interest of his book is in that department of it; he admits the shortcomings of his military knowledge and they are evident in the weakness of his criticisms. The military value of the book is the publication for the first time of the full text of the long-secret plan.

It is a pity that Captain Liddell Hart, as a military commentator, did not take advantage in his foreword to correct the balance of the book. He not only gives his blessing to Herr Ritter's unconvincing military argument but goes beyond it, from the historical to the present time, and can find little reason "why Schlieffen has for so long been regarded as a master mind." He could have found the reason in the introduction by General von Fritsch to Schlieffen's *Denkschriften*, published in 1938; "Schlieffen was the originator (*Lehrmeister*) of modern battle methods." The underlying ideas of Schlieffen's plan form in fact the basis of the text-book training manuals hammered out by the Ludendorff-Lossberg combination during the first World War and given to the German Army in December, 1916; that tactical doctrine for attack and defence dominated the battles of the second World War, and still exists today in the training and organization of the West German Federal Army and of the Russian Army.

Another fundamental error in Captain Liddell Hart's foreword is his statement that Schlieffen "had little concern with the vital change in tactical conditions due to the tremendous development in the fire-power of weapons." A glance through the book shows, on the contrary, that that vital change was in fact the very core of, and reason for, Schlieffen's plan. "The fire-power of a modern army corps with its large number of machine-guns and its heavy artillery is so enormous that the regulations still in force for the tactical deployment of infantry need to be changed"; and the change he advocated was to abolish frontal attacks and linear defence, which he predicted would be suicidal against the new fire-power, and to adopt instead the tactics of envelopment both for attack and defence, strategically and tactically, modelled on Hannibal's victory at Cannae in 216 B.C.

The mystery is not why Schlieffen has been regarded as the originator of a new era in tactical progress but why British and American military leaders and planners have for so long neglected his teaching. Why is the training of their armies and their tactical outlook still basically the same as that which Schlieffen discarded as obsolete over 50 years ago? Captain Liddell Hart's foreword, by treating Schlieffen's plan as a dead and dusty legend, has unfortunately failed to enlighten British readers, and especially those of the armed forces, about a matter of vital concern for the present defence of Britain and Western Europe.

In answer to Colonel Bidwall's letter in your May number, Rommel's plan for Alam Halfa was the normal German tactical doctrine of envelopment, as for Gazala, but the strong right wing met an unexpectedly deep minefield and was only able to advance eight miles instead of 25 miles as planned before turning north towards the coast and Alexandria. If Mr. Paret will look at almost any German regimental history he will find that the German tactical doctrine is not my invention.

G. C. WYNNE,

22nd June, 1958.

Captain.

SIR,—Captain Wynne has very courteously sent me a carbon copy of the letter of protest he has addressed to you about Professor Gerhard Ritter's book, *The Schlieffen Plan*, and my foreword to that very important work of historical research. My personal regard for Captain Wynne and high respect for his tactical studies of the first World War make me very reluctant to enter into public controversy with him, but the directness of his challenge compels a reply.

I am in close accord with his tactical views and his advocacy of mobile defence—trapping tactics based on the power of automatic weapons and timely counter-attack—as ably expounded not only in his recent articles but in his 1939 book, *If Germany Attacks—The Battle in Depth in the West*. When given the opportunity in 1920, through General Sir Ivor Maxse, to write the *Infantry Training Manual* immediately after the first World War, I recast it on similar lines—although the draft was somewhat watered down by the War Office, while subsequent editions gradually reverted to more rigid and linear methods. Such a reversion commonly occurs during long intervals of peace, so that Captain Wynne's book came as a valuable corrective—although, unfortunately, it did not receive as much attention as it deserved.

But, much as I agree with his tactical views and admire his critical spirit, I would question his contention that the British Army of today is "50 years out of date as a fighting force"—and also his statement that it "is still being trained today in battle methods that Schlieffen tore up as obsolete over 50 years ago."

It is surprising that Captain Wynne should credit Schlieffen with being a great reformer and originator of tactical methods, while even more astonishing that he should acclaim Schlieffen as the great advocate of the machine-gun.

As support for the first of these claims, he cites General von Fritsch's comment in 1938 that "Schlieffen was the originator of modern battle methods." But anyone who knows German so well as Captain Wynne must surely be aware that Fritsch's phrase, *Lehrmeister des modernen Krieges*, does not mean anything of the sort—*Lehrmeister* means teacher, not originator, and *Krieges* means warfare in the broad sense, not battle methods. As support for the second claim—that a farsighted appreciation of the power of machine-guns was "the very core of, and reason for, Schlieffen's plan"—Captain Wynne quotes a sentence which is not in any of Schlieffen's writings, but comes in a commentary by his son-in-law, Wilhelm von Hahnke, who assembled the papers after Schlieffen's death in 1913.

In all the successive drafts of Schlieffen's plan when Chief of the General Staff there is not a single mention of machine-guns. Even in his later writings after retirement there are only a few casual references to this new weapon, without any emphasis on its importance. It becomes obvious that in the places where Schlieffen referred to infantry fire-power he was thinking mainly in terms of rifles—although Captain Wynne's articles repeatedly put the word 'machine-gun' or 'machine-gunner' into his mouth. Moreover, the German Army under Schlieffen and his successor was very slow in developing the provision of machine-guns. In the opening stages of the 1914-18 War it had only 24 in the infantry division of 12 battalions—no more than our own Army's meagre scale. As Mr. Paret pointed out in his letter in your February issue, the assertion that the German Army had "50,000 machine-guns ready for service" at the outbreak is completely untenable.

D

Captain Wynne goes on to claim that the new German defence tactics developed in the second half of that war were really Schlieffen's tactics, inspired by and based on his pre-war teachings. This is very strange. For on looking up Captain Wynne's 1939 book, which devotes 300 pages to an historical account and analysis of the development of those tactics, I find that he makes only one slight reference to Schlieffen—and that only as a possible influence on the "cast-back to historical precedent" in the three-echelon disposition of Roman legion pattern. Captain Wynne's verdict there, after 20 years' study of the war, was that the development of the new German defence tactics "was mainly the work of one master-mind"—this being General von Lossberg who was the hero of that book. It was a better founded claim than he now makes for Schlieffen, although the Germans themselves tend to give the main share of the credit to Captain Geyer, in conjunction with General Ludendorff and General von Lossberg.

After reading Captain Wynne's opening article, and finding that there was so little supporting evidence in Schlieffen's own writings, I sought to check it further by making enquiries about the matter among German generals who were well placed to know. General Liebmann, who became a member of the General Staff in 1912 and was Commandant of the Staff College in the 'thirties, replied: "It is not correct that Schlieffen influenced in a remarkable way the German tactics in the first or even in the second World War. Also it is untrue that development or introduction of machine-guns and of mobile defence is due to his influence." He went on to say that "Schlieffen's importance and greatness does not lie in the tactical but in the operational and strategical field." General Dittmar added that "the mobile defence of 1917 was a product" of proposals that "came from the fighting troops" from their experience in the Somme Battle, and related how a treatise which he himself wrote in 1916 on mobile defence met at first with "severe rebuffs from orthodox higher levels. If the proposal could have had the authority of Schlieffen on its side, it would have been easier to overcome the reluctance of Falkenhayn's school," who insisted on "sticking to every piece of ground."

General Geyr von Schweppenburg replied: "The influence on *strategy* by the Schlieffen mentality was almost decisive; *not in tactics, however.*" He went on to say that: "The entire German Army never realized in its conservative-mindedness the importance of the machine-gun. . . . It is my humble person who fought it through that every squad got a machine-gun, first in the German cavalry. This was adopted by the infantry soon after, if with bleeding hearts of the old diehard infantrymen." On the second question he replied: "The author of the new mobile defence tactics that were developed by Ludendorff in 1917 was the then General Staff Major Geyer, also a Württemberger, later G.O.C. IX Army Corps, axed after Moscow by the 'wall-painter.' In army circles they called him *Infanteriegeyer*, myself *Panzergeyr*." In conclusion he said that: "During the 1930s the influence of Schlieffen in the strategical field had vaporized. . . . There had never been influence of his mentality in tactics."

More astonishing still is Captain Wynne's contention, in his second article, that the German Panzer tactics developed by Guderian in the 1930s were based on Schlieffen's ideas and Schlieffen's method of attack, and that Rommel in particular was Schlieffen's disciple. For although Guderian in his memoirs and Rommel in his papers are generous in acknowledging the original source of their ideas and ascribe these primarily to British military writers, they nowhere suggest that Schlieffen inspired their ideas and battle methods. Rommel's only reference to Schlieffen is a criticism of his influence on command methods, and Guderian's few references are also critical of Schlieffen's school. As a further check I enquired of General Cruwell, the commander of the Afrika Korps under Rommel, who replied: "Guderian and Rommel, in their commanding of rapid formations, were not influenced by Schlieffen. I never heard Rommel make any reference to Schlieffen, nor Guderian either."

Captain Wynne's exposition of tactical principles is of such value in itself that it is a pity he has taken Schlieffen as his historical peg.

Schlieffen strongly influenced German military thinking in favour of envelopment instead of frontal attack, and appreciated the value of threatening the opponent's rear. No one would dispute his influence in such broad ways. But these basic principles have been applied by almost all the great commanders in history, and emphasized in the writings of most military thinkers. Indeed Sun Tzu, in his book *The Art of War*, written in 500 B.C., showed a deeper and subtler grasp of these principles than Schlieffen did.

B. H. LIDDELL HART,

1st July, 1958

Captain.

JAPANESE AIRCRAFT LOSSES

SIR,—With reference to Squadron Leader J. G. Walker's letter about Japanese air losses over Ceylon in April, 1942, the figure of 17 aircraft given in *The War at Sea, Volume II*, was taken from a report prepared by the Historical Research Division, Tokyo, in 1952. The source used for that work was an original Japanese wartime document entitled *Battle Lessons of the Greater East Asia War (Air)*, Volume V, published by the Battle Lesson Research Committee of the Imperial Japanese Navy in 1942. This report agrees very closely with the same operations as recorded in British documents, and is considered to be of high reliability. The detailed figures given in it are as follows:—

- (1) In raid on Colombo, one fighter and six bombers lost.
- (2) In raid on Trincomalee, three fighters and one attack plane lost.
- (3) In attack on H.M.S. *Hermes*, one fighter and four bombers lost.
- (4) In air combat on 9th April, one fighter lost.

I presume that Messrs. Saunders and Richards based their statement of losses on the British claims made at the time of the attacks. I have no knowledge regarding the basis of the statements made by the authors of *Zero* and *Death of a Navy*, neither of whom quotes any sources; but my study of both those books has not given me confidence in their reliability. Professor Morison, in Volume III of *United States Naval Operations*, also greatly overestimated the losses inflicted on the Japanese, as I pointed out to him at the time my second volume was published.

S. W. ROSKILL,

Captain, Royal Navy.

14th June, 1958.

RECORDS OF THE WAR OF INDEPENDENCE

SIR,—The U.S. Navy Department has announced plans to collect and publish the much-scattered documents relating to the naval and maritime history of the American Revolution. Mr. William Bell Clark will edit the work. The Navy Department states that a major contribution to the success of the project can be made by anyone possessing or knowing of unpublished letters, diaries, reports, ships' logs, and other Revolutionary War naval documents for the years 1775–1785, and who will make such material for information available to the Director of Naval History, Navy Department, Washington 25, D.C. Material submitted will be on a loan and will, of course, be returned.

E. M. ELLER,

Rear Admiral, U.S.N. (Ret.),

Director of Naval History.

22nd April, 1958.

WORLD SECURITY AUTHORITY

SIR,—Mr. Duncan Sandys, Minister of Defence, has put forward in the House of Commons a daring and far-sighted suggestion to achieve comprehensive disarmament at a single step. It is bolder and likely to be more effective than any of the similar plans put forward by peace organizations and newspapers in recent years. It covers conventional as well as nuclear weapons; for many seem to have forgotten that, if nuclear weapons could be banished, war would be more likely to occur and could be absolutely catastrophic, e.g., there is no known protection from the modern war gases. His plan is bolder than that put forward by Federal Union and the United Nations Association for a small, directly recruited, and lightly armed international force, which could have little effect on the nuclear arms race that is now taking place between East and West. His plan does not upset the present precarious balance of opposing forces.

He wisely advocates establishing a strong world security authority before disarmament begins. He has obviously remembered the futility of many previous disarmament conferences since the first World War, when abortive attempts were made to achieve some degree of disarmament before facing the problem of creating a collective security system or an international force. Disarmament will follow security, but not precede it.

He suggests that a world security authority would have to be set up which would need two instruments: (1) an international arms inspectorate with wide powers, and (2) an international police force, possessing military superiority over the disarmed nations and capable of dealing with infringements.

Similar plans have been submitted before by members of the New Commonwealth Society (whose President was Sir Winston Churchill) and the organizations mentioned above, but little progress was made because the Government and its military advisers appeared unwilling to surrender any national sovereignty or give up their belief in our traditional defence policy, based on a balance of power.

Mr. Sandys may have to face opposition from many of his Service advisers and others, but if he is strong enough to follow up his suggestions with effective action he may re-establish Great Britain's prestige in a new world, freed from the menace of war.

Both Russia and America have in the past made practical suggestions for strengthening world authority. Russia can be given credit for one of the most far-reaching proposals for strengthening the United Nations, when in 1944 she proposed an international air force. Sir Winston Churchill commented favourably upon the idea in a minute to the Chiefs of Staff Committee and wrote, "The introduction of an international air force is an event of the utmost importance and cannot possibly be settled on departmental considerations." Russia now fears Western German rearmament, which clearly has its dangers. Russia's misuse of the veto was largely responsible for the breakdown of the U.N. collective security system; but there is now a more hopeful atmosphere.

World government is not yet possible or desirable; but security from war should be taken out of national hands and should become the responsibility of world authority, as Lord Beveridge recently urged. National military forces are becoming an anachronism in the nuclear age and should be abolished; but to achieve this objective needs the steps urged by Mr. Sandys.

A study of military history over the past 40 years convinces me that if Britain had tried to create a collective security system or a military alliance in support of the League of Nations, the second World War and the decline of Britain would have been prevented. Britain is now in an unique position to take the lead in re-establishing world authority and reversing traditional defence policy before it is too late to prevent a third World War.

R. FULLJAMES,
Group Captain (Retd.).

19th June, 1958.

NON-VIOLENT RESISTANCE

SIR,—I hope that the lecture by Commander Sir Stephen King-Hall does not imply to the Soviets what the Oxford Union resolution implied to Nazi Germany. Commander King-Hall ignores a basic tenet—'Know your enemy.' There is no historical parallel to a Communist occupation of Europe. It is probable that General Serov would be called on to carry out the biggest job of his career, that the Soviet operations on the Balts and Hungarians would in comparison be reduced to dummy runs, and that in far less than 200 years there would be no recognizable nations in the west. The British reputation as fighters with their backs to the wall would almost certainly call for the most severe measures and one can envisage all British males being distributed throughout the salt and uranium mines of Russia and Siberia. The Commander is just too naïve for words and should study closely Communist ideology and practice.

N. C. HANSLIP,
Squadron Leader.

3rd June, 1958.

GENERAL SERVICE NOTES

SOUTH-EAST ASIA TREATY ORGANIZATION

The communiqué issued on the conclusion in Manila on 13th March of the fourth annual meeting of the S.E.A.T.O. Council, which was attended by Mr. Selwyn Lloyd, the British Foreign Secretary, included the following items :—

“ The Council considered the continuing Communist threat to the region. The Ministers reaffirmed their determination to maintain national and collective defence against the possibility of Communist and Communist-inspired armed aggression, while at the same time earnestly working for international disarmament with adequate safeguards covering both nuclear and conventional elements.”

“ Australia announced that she would make available to the Asian members of S.E.A.T.O. a further £1,000,000 for purposes generally related to S.E.A.T.O. defence, in addition to £2,000,000 previously contributed by Australia for these purposes.”

“ The Council noted with approval the work of their military advisers and of the Military Planning Office, which has completed its year's work. Plans in fulfilment of the defensive role of S.E.A.T.O. have been developed to resist aggression in the treaty area. Since the last Council meeting, four major S.E.A.T.O. military exercises have been held, as well as three multilateral or bilateral exercises. These have served effectively to increase the degree of co-operation between the forces of the S.E.A.T.O. Powers and to make them more ready for speedy action in the event of any sudden attack. The Council authorized a further programme of combined exercises.”

“ The United States and the Philippines announced that they intend to co-sponsor a defence college, to be located in the Philippines, open to members and non-members of S.E.A.T.O. The Council took note of this announcement with particular interest.”

GREAT BRITAIN

MEMORIAL TO OVERSEA MEMBERS OF THE COMMONWEALTH AND EMPIRE

H.M. The Queen, H.R.H. the Duke of Edinburgh, and other members of the Royal Family were present on 7th May at the consecration by the Bishop of London of the new High Altar in St. Paul's Cathedral, erected as a Memorial from the people of Britain to oversea members of the Commonwealth and Empire who gave their lives in the 1914-18 and 1939-45 Wars.

Included among a congregation of 3,000 were the High Commissioners in London from the Commonwealth countries and representatives from the Commonwealth Relations Office and the Colonial Office. Sixty cadets now training in Britain from 17 Commonwealth countries lined the steps to the west door.

BRITISH TROOPS IN GERMANY, SUPPORT COSTS

On 29th May the Foreign Office announced the arrangements for meeting support costs for British troops in Germany for the next three years.

Germany will pay £12,000,000 annually for three years towards these costs, will also deposit £50,000,000 free of interest for arms orders in Britain, and will repay now three instalments of Germany's post-war debt to Britain which were due for the years 1962-64. The British Government will maintain a substantial force on the Continent until 1960-61 within the limits of what can be afforded in relation to the balance of payments, and have declared to N.A.T.O. their intention to maintain the British Army in Germany at the strength of 55,000 until the end of 1958, and after that a minimum of 45,000 men and the Second Tactical Air Force at its present strength until April, 1961. The British Government have undertaken to find the balance of the costs.

C.I.G.S. CONFERENCE AND EXERCISE

The Chief of the Imperial General Staff, Field-Marshal Sir Gerald Templer, will hold an exercise entitled "Guardian" at the Staff College, Camberley, on 7th and 8th August. This will be the 14th of its kind. It is designed to study the conduct of the land battle in the light of the changes in tactical doctrine necessitated by the introduction of nuclear weapons. As in previous years, the exercise will be attended by senior officers of the British and Commonwealth Armies and of the other two fighting Services.

The exercise will be preceded by a conference on 6th August, for United Kingdom officers only, to deal with domestic matters affecting the reorganization of the Army and to hear statements of policy and progress from Members of the Army Council on many of the subjects discussed at last year's conference.

IMPROVEMENT IN REGULAR RECRUITING

Recruiting figures for April, when the new code of pay and allowances began, showed a satisfactory improvement in the number of men volunteering for longer engagements. They were as follows (those for April, 1957, in parentheses):—

Royal Navy and Royal Marines. Nine-year engagements, 342 (195).

Army. Three years, 362 (2,005); six years, 1,573 (106); nine years, 483 (149). Grand total, including boys and apprentices, 2,978 (2,433).

Royal Air Force. Three years, 692 (531); four years, 119 (64); five years, 248 (253); nine years and over, 488 (209).

The improvement was maintained in May. The figures for the Royal Navy and Royal Marines, 248, and the Army, six years, 1,307, were lower, but the nine years' figure, 575, for the Royal Air Force was a post-war record.

RECRUITMENT TO THE CIVIL DEFENCE AND ALLIED SERVICES

The strength of the various services in Great Britain on 31st December, 1957, was as follows:—

| | | | | | |
|---------------------------------------|-----|-----|-----|-----|---------|
| Civil Defence Corps ... | ... | ... | ... | ... | 360,987 |
| Auxiliary Fire Service ... | ... | ... | ... | ... | 19,948 |
| National Hospital Service Reserve ... | ... | ... | ... | ... | 62,759 |
| Special Constabulary ... | ... | ... | ... | ... | 62,673 |
| Total ... | ... | ... | ... | ... | 506,367 |

AUSTRALIA

CHAIRMAN OF CHIEFS OF STAFF COMMITTEE.—Lieut.-General Sir Henry Wells, K.B.E., C.B., D.S.O., has been appointed to the newly created post of Chairman of the Chiefs of Staff Committee in the Department of Defence.

AMALGAMATION OF DEPARTMENTS.—As a result of the recommendations of the Committee under the chairmanship of Lieut.-General Sir Leslie Morshead, the Department of Supply and Defence Production are to be amalgamated.

INCREASES IN SERVICES PAY.—On 18th June, Sir Philip McBride, the Australian Minister for Defence, said that the Cabinet had approved increases in Services pay and allowances which would cost the Treasury more than £A4,500,000 (£3,600,000) a year. These increases implement the major recommendations of a committee under the chairmanship of Sir John Allison. They will be paid from July, 1958.

NEW ZEALAND**END OF CONSCRIPTION**

It was announced from Wellington on 27th June that compulsory military training for all males over 18 will cease on 31st March, 1959. It will still be compulsory, however, for all males to register and have a medical examination on reaching the age of 18.

FOREIGN**RUSSIA****STRENGTH OF ARMED FORCES**

The following figures were published by the N.A.T.O. Secretariat after General Norstad's report to N.A.T.O. Defence Ministers prior to the North Atlantic Council meeting in Copenhagen from 5th-7th May :—

The Soviet Army was estimated to have 82 divisions under arms (3,000,000 men), capable of expansion to 400 divisions within 30 days after an outbreak of war. (2) Tanks, mortars, and anti-tank guns were sufficient for 300 divisions. (3) Twenty-two divisions (mostly armoured) were in Eastern Germany, and 60 were in eastern Europe and western Russia. (4) The Soviet Air Force possessed 20,000 aircraft. (5) The Soviet Navy would have about 700 submarines within two or three years.

NOTICES**WOOLWICH SEARCHLIGHT TATTOO**

This year's Woolwich Searchlight Tattoo takes place at Woolwich Stadium on 10th-13th September.

Turns will include displays by the Royal Military Band of the Dutch Grenadier Guards, the United States Air Force, the Women's Royal Army Corps, and the King's Troop, Royal Horse Artillery. Retained from previous years will be the Alarm Stakes, a competition for 25-pounder guns. For the first time the competition this year will be an inter-divisional one.

Tickets for the Tattoo may be obtained from Messrs. Keith, Prowse & Co., Ltd., 90, New Bond Street, W.1, Tel. : HYDe Park 6000, or the usual agents, price 15s. to 3s. 6d.

ARMY ART SOCIETY

The Society, which exists to encourage art in the Army and sister Services, is holding its 27th exhibition in London during October, 1958, at the Commonwealth Institute (Imperial Institute), South Kensington, S.W.7. All ranks of the Army, the Royal Navy, and the Royal Air Force, past or present, permanent or temporary, may submit works for consideration. Intending exhibitors are invited to apply for particulars. Applications should be addressed to : Hon. Secretary, Army Art Society, Captain A. J. Daldy, 16, King Edward's Grove, Teddington, Middlesex.

NAVY NOTES

H.M. THE QUEEN

The Queen and the Duke of Edinburgh on 27th June began a 12-day tour of the East Coast and Scotland until 8th July. After engagements in Lincoln and Scunthorpe, they boarded the Royal yacht *Britannia* at Immingham. On 28th June they visited Grimsby and Cleethorpes, and next day landed from the yacht on Holy Island, off Northumberland. On 30th June they arrived in the yacht at Rosyth for a tour of Fifeshire. On 1st July they landed at Leith and took up residence at the Palace of Holyroodhouse.

AIDES-DE-CAMP.—Captain R. W. Jones has been appointed a Naval Aide-de-Camp to The Queen from 13th April, 1958, in succession to Captain H. R. Harold, O.B.E.

Captain R. V. E. Case, D.S.O., D.S.C., R.D., R.N.R., has been appointed a Royal Naval Reserve Aide-de-Camp to The Queen from 14th June, 1958, in succession to Captain E. Hewitt, R.D., R.N.R.

Captain W. D. Thorburn, V.R.D., R.N.V.R., has been appointed a Royal Naval Volunteer Reserve Aide-de-Camp to The Queen from 1st June, 1958, in succession to Captain C. H. Homan, D.S.C., V.R.D., R.N.V.R.

Commandant E. L. E. Hoyer-Millar, O.B.E., W.R.N.S., Director of the Women's Royal Naval Service, has been appointed an Honorary Aide-de-Camp to The Queen from 7th April, 1958, in succession to Commandant Dame Nancy M. Robertson, D.B.E., W.R.N.S.

HONORARY PHYSICIAN.—Surgeon Rear-Admiral W. R. S. Panckridge has been appointed an Honorary Physician to The Queen from 31st March, 1958, in succession to Surgeon Rear-Admiral D. Duncan, C.B., O.B.E.

ITALIAN STATE VISIT.—The President of the Italian Republic and Signora Gronchi travelled from Calais to Dover in H.M.S. *Grenville* on their State visit to Britain on 13th May. Escort duties outside French territorial waters were taken over from the French destroyer *Jaureguiberry* by H.M. Ships *Paladin*, *Undine*, and *Ursa*.

THE QUEEN MOTHER

H.M. The Queen Mother visited Northern Ireland in May. She embarked in the *Britannia* at Liverpool on 7th May and landed at Bangor next day, having been escorted by H.M.S. *Mersey* in local waters and H.M.S. *Blackwood* across the Irish Sea. The Royal yacht subsequently proceeded to Belfast and Her Majesty returned in her to Portsmouth, arriving on 12th May.

PRINCESS MARGARET

Ships of the West Indies Squadron mounted a ceremonial guard at the Governor-General's residence at Port of Spain during the first three days of Princess Margaret's visit to inaugurate the new Federal Legislature of the West Indies on 22nd April. H.M.S. *Troubridge*, wearing the broad pendant of the S.N.O., West Indies, Commodore G. E. Hunt, H.M.S. *Messina*, and H.M.S. *Ulster* fired a Royal salute as the Princess landed at Trinidad.

DUKE OF EDINBURGH

The Duke of Edinburgh, Captain General Royal Marines, took the salute when the massed bands of the Royal Marines beat retreat on the Horse Guards Parade on 10th June.

HONORARY ADMIRAL

H.M. King Olav V of Norway, G.C.B., G.C.V.O., has been appointed an Honorary Admiral in Her Majesty's Fleet, to date 2nd July, 1958.

HONOURS AND AWARDS.

The following were conferred on the occasion of the celebration of Her Majesty's Birthday on 12th June :—

K.C.B.—Vice-Admiral Walter Thomas Couchman, C.B., C.V.O., D.S.O., O.B.E. ; Vice-Admiral Manley Lawrence Power, C.B., C.B.E., D.S.O.

C.B.—Rear-Admiral A. S. Bolt, D.S.O., D.S.C. ; Rear-Admiral T. V. Briggs, O.B.E. ; the Ven. Archdeacon F. Darrell Bunt, O.B.E., Chaplain of the Fleet ; Rear-Admiral W. G. Crawford, D.S.C. ; Rear-Admiral C. L. G. Evans, C.B.E., D.S.O., D.S.C. ; Rear-Admiral J. S. Lancaster ; Rear-Admiral A. C. C. Miers, V.C., D.S.O. ; Rear-Admiral P. D. H. R. Pelly, D.S.O. ; Surgeon Rear-Admiral R. L. G. Proctor ; Rear-Admiral R. H. Wright, D.S.C.

K.C.V.O.—Captain Sir Arthur W. Jarratt, R.N.V.R.

K.B.E.—Vice-Admiral Hilary Worthington Biggs, C.B., D.S.O. ; Rear-Admiral Kenyon Harry Terrell Peard, C.B.E.

SUEZ OPERATIONS

The Queen has approved the acceptance and wearing of the following awards made by the French Government in recognition of services during operations in 1956 in the Near East :—

Vice-Admiral Sir Robin L. F. Durnford-Slater, K.C.B.—Legion of Honour (Grade of Commander) ; Vice-Admiral M. L. Power, C.B., C.B.E., D.S.O.—Croix de Guerre de Theatre d'Operations Exterieurs avec Palme.

FLAG APPOINTMENTS

NORE COMMAND.—Vice-Admiral Sir John L. F. Durnford-Slater, K.C.B., to be Commander-in-Chief, The Nore, in succession to Admiral Sir Frederick R. Parham, K.C.B., C.B.E., D.S.O. (July, 1958).

MEDITERRANEAN FLOTILLAS.—Rear-Admiral R. A. Ewing, D.S.C., to be Flag Officer Flotillas (Mediterranean) (early June, 1958).

A.C.R.—Vice-Admiral G. Thistleton-Smith, C.B., G.M., hauled down his flag as Admiral Commanding Reserves in H.M.S. *Discovery* at sunset on 23rd April. The flag of his successor, Vice-Admiral W. K. Edden, C.B., O.B.E., was hoisted that morning in H.M.S. *Chrysanthemum* and transferred to the *Discovery* next day. The rare sight was thus provided of the flags of two Admirals flying from ships of the London Division, R.N.V.R., on the Victoria Embankment.

D.N.O.—Rear-Admiral G. C. de Jersey to be Director of the Naval Ordnance Department in succession to Captain R. E. Washbourn, D.S.O., O.B.E. (early May, 1958).

D.N.L.D.—Captain K. R. Buckley, A.D.C., to be promoted to Rear-Admiral to date 7th July, 1958, and to be Director of the Naval Electrical Department in succession to Rear-Admiral K. H. T. Peard, C.B.E. (August, 1958).

PROMOTIONS AND RETIREMENTS

Admiral Sir C. T. Mark Pizey, G.B.E., C.B., D.S.O., placed on the Retired List (25th April, 1958).

Admiral Sir Ralph A. B. Edwards, K.C.B., C.B.E., placed on the Retired List at his own request to facilitate the promotion of junior officers (15th May, 1958).

Vice-Admiral Sir Ballin I. Robertshaw, K.B.E., C.B., placed on the Retired List (1st April, 1958).

Rear-Admiral Sir Kenyon H. T. Peard, K.B.E., placed on the Retired List (22nd August, 1958).

Surgeon Rear-Admiral D. Duncan, C.B., O.B.E., placed on the Retired List (31st March, 1958).

Commandant Dame Nancy M. Robertson, D.B.E., Hon.A.D.C., W.R.N.S., placed on the Retired List (7th April, 1958).

HALF-YEARLY PROMOTIONS

The following promotions and retirements were announced to date 7th July, 1958:—

Retirements.—Vice-Admiral Sir W. Geoffrey A. Robson, K.B.E., C.B., D.S.O. D.S.C.; Rear-Admiral K. McN. Campbell-Walter, C.B.; Rear-Admiral J. E. H. McBeath C.B., D.S.O., D.S.C.; Rear-Admiral G. A. Thring, C.B., D.S.O. This brings the total number of Flag Officers retired since the last half-yearly promotions in January, 1958, to 14.

Promotions. To Vice-Admiral.—Rear-Admiral L. G. Durlacher, C.B., O.B.E., D.S.C. *To Rear-Admiral.*—Captain P. W. Gretton, D.S.O., O.B.E., D.S.C., A.D.C.; Captain E. N. V. Currey, D.S.O., D.S.C., A.D.C.; Captain the Earl Cairns; Captain (Acting Rear-Admiral) J. G. Hamilton, C.B.E.; Captain (Acting Rear-Admiral) M. Le Fanu, D.S.C.; Captain E. Mill, O.B.E.; Captain N. E. Denning, O.B.E.

These promotions and retirements, together with retirements expected during the next six months, should result in a decrease of 14 in the total number of officers on the Flag List at the end of this year compared with the number at the end of 1957.

The Admiralty announce the following promotions to date from 30th June, 1958:—

Seaman Specialists : Commander to Captain.—H. A. Corbett, D.S.O., D.S.C.; M. D. Kyrle Pope, M.B.E.; D. A. Dunbar-Nasmith, D.S.C.; A. G. McCrum; D. B. N. Mellis, D.S.C.; F. D. G. Challis, D.S.C.; W. D. S. White; G. C. Leslie, O.B.E.; M. F. Fell, D.S.O., D.S.C.; R. E. Lloyd, D.S.C.; T. T. Lewin, D.S.C.; C. K. Roberts, D.S.O.

Engineer Specialists : Commander to Captain.—W. A. Haynes, O.B.E.; H. J. S. Banks; R. R. H. Boddy; L. E. S. H. Le Bailly, O.B.E.

Supply and Secretariat Specialists : Commander to Captain.—N. S. Grant, O.B.E., D.S.C.; I. G. Mason.

Electrical Specialists : Commander to Captain.—J. B. Holt; P. L. V. Slater, O.B.E.

Instructor Branch : Instructor Commander to Instructor Captain.—W. H. Watts, O.B.E. (Acting Instructor Captain); A. J. Bellamy, O.B.E. (Acting Instructor Captain).

Medical Branch : Surgeon Commander to Surgeon Captain.—T. F. Davies; S. H. R. Price; M. A. Rugg-Gunn; I. C. Macdonald.

Dental Branch : Surgeon Commander (D) to Surgeon Captain (D).—W. G. Finnie; A. M. Watson.

EXERCISES AND CRUISES

HOME FLEET.—During May ships of the Home Fleet carried out summer training in the Firth of Forth, Moray Firth, and Loch Eriboll. The cruise *Birmingham* was detached to visit Casablanca, Lisbon, and Brest with the Commander-in-Chief, Admiral Sir William Davis, returning to Plymouth on 24th May. A programme of visits to ports in Northern Europe was arranged for June, and to resorts in the United Kingdom in July. N.A.T.O. exercises were included in the training programme. The *Birmingham* was ordered to visit Quebec from 26th June to 4th July for the city's 350th anniversary celebrations.

N.A.T.O. MINESWEEPING.—Six coastal minesweepers attached to R.N.V.R. Divisions took part in a N.A.T.O. exercise in Dutch and Belgian waters from 21st June to early July.

MEDITERRANEAN.—Between 23rd and 26th April British and Italian forces co-operated in a N.A.T.O. exercise in the Punta Niedda and Cape Teulada areas of Sardinia, designed to practise the support of ground troops by naval gunfire and air

strikes. The exercise was directed by Vice-Admiral Sir Robin Durnford-Slater, Second-in-Command, Mediterranean. An Allied strategic naval and air exercise known as "Medflex Fort," directed by the Commander-in-Chief, Admiral Sir Charles Lambe, took place between 19th and 24th May in the Mediterranean from Gibraltar to the Dardanelles. Running concurrently was a naval control of shipping exercise named "Medship Bastion." French, Greek, Italian, Portuguese, Turkish, United Kingdom, and United States forces took part.

EAST INDIES.—Ships and aircraft of the Indian, Pakistan, Ceylon, and Royal Navies combined in June in an anti-submarine exercise named "Jet," based on Trincomalee. Among the six British ships was the cruiser *Gambia*, flying the flag of Vice-Admiral Sir Hilary Biggs, Commander-in-Chief, East Indies, and the aircraft carrier *Bulwark*.

FAR EAST.—Ships of Australia, New Zealand, Pakistan, the United Kingdom, and the United States left Singapore on 1st May to begin exercise "Ocean Link," the largest S.E.A.T.O. naval exercise to date. Rear-Admiral Almon E. Loomis, U.S.N., in overall command of the ocean force, flew his flag in the U.S.S. *Philippine Sea*. Task group commanders were Rear-Admiral L. G. Durlacher, Second-in-Command, Far East Station, embarked in H.M.S. *Bulwark*, and Rear-Admiral H. M. Burrell, Flag Officer Commanding H.M. Australian Fleet, in H.M.A.S. *Melbourne*. The object was to develop proficiency in the conduct of combined naval operations in the S.E.A.T.O. area, and to promote close working relationships between the various nations for mutual defence.

PERSONNEL

CADETS FROM LOWER DECK.—Revised plans for entry and training under the Upper Yardmen scheme for the promotion of ratings to commissioned rank, aimed at ensuring that they have the same prospects as cadet entry officers, were announced by the Admiralty on 2nd April. In future, Upper Yardmen who are passed by an interview board after completing a preliminary 28 weeks' course will go on as cadets to H.M.S. *Temeraire*, the Upper Yardmen establishment at Port Edgar. If successful at this stage of their training, they will be promoted to midshipmen to continue at the Britannia Royal Naval College, Dartmouth. There they will be integrated with the normal cadet entry. This will be the first time that officers appointed from the lower deck have undergone training at the Royal Naval College.

SCHOOL OF WORK STUDY.—The R.N. School of Work Study was opened by the First Sea Lord, Admiral of the Fleet Lord Mountbatten, at Portsmouth on 4th July. It is located in the R.N. Barracks and has been modelled on the work study instructional department of an international commercial undertaking. Work study has been accepted by the Navy as an aid to fighting efficiency and the proper use of time and resources.

MATERIEL

H.M.S. LEVIATHAN.—In reply to a question in the House of Lords on 25th June, Lord Selkirk, the First Lord, said that the aircraft carrier *Leviathan* is not to be completed at the present time. The *Leviathan* was launched on the Tyne in June, 1945. Work on her was suspended in May, 1946, and she has since been laid up at Portsmouth.

ACCEPTANCES.—H.M.S. *Llandaff*, second ship of the "Salisbury" class, was provisionally accepted into service on 11th April from Hawthorn Leslie, Ltd., Hebburn-on-Tyne. H.M.S. *Chichester*, third ship of this class, was provisionally accepted from the Fairfield Shipbuilding and Engineering Company on 16th May. Frigates of this class are designed primarily for the direction of carrier-borne or shore-based aircraft, and can also serve as a smaller type of destroyer in offensive operations.

H.M.S. EXCALIBUR, second of the experimental high speed submarines, was provisionally accepted from Vickers-Armstrongs, Barrow, on 22nd March. She has a modern version of the diesel-electric propulsion system, which can be augmented by turbine machinery in which the energy is supplied by burning diesel fuel in decomposed hydrogen peroxide. The maximum underwater speed is over 25 knots.

H.M.S. *Porpoise*, the first operational submarine to be designed since the war, was commissioned at the Vickers-Armstrongs yard, Barrow, on 17th April.

LAUNCH.—H.M.S. *Londonderry*, of the "Whitby" class of anti-submarine frigates, was launched on 20th May at the shipyard of Messrs. J. S. White & Co., Cowes.

H.M.S. MAIDSTONE.—The submarine depot-ship *Maidstone*, after arriving at Portsmouth on 31st March from the Home Fleet spring cruise, was paid off after 20 years' continuous service—a single commission embracing the War in the Mediterranean and the Pacific and peacetime duty with the Home Fleet, some time as flagship.

ROYAL NAVAL RESERVE

PROMOTIONS.—The following have been made to date 30th June, 1958 :—

Seaman Branch : Commander to Captain.—F. J. Storey, R.D., Chief Officer, s.s. *Queen Elizabeth* ; K. A. Gadd, D.S.C., R.D., Trinity House pilot ; H. J. Chaloner, Staff Captain, s.s. *Queen Elizabeth*.

Supply and Secretariat Branch : Commander to Captain.—R. Clarke, R.D., Inspector, Lloyds Bank, Ltd.

ROYAL NAVAL VOLUNTEER RESERVE

PROMOTIONS.—The following have been made to date 30th June, 1958 :—

Seaman Branch : Commander to Captain.—Sir John D. Clerk, Bt., V.R.D., D.L. (Acting Captain), Forth Division ; N. MacNaughton Wainwright, V.R.D., Severn Division ; J. E. Robson, R.D. (Acting Captain), Ulster Division.

Medical Branch : Surgeon Commander to Surgeon Captain.—P. de B. Turtle, V.R.D., London Division.

Special Branch : Commander (SP) to Captain (SP).—N. A. J. Gaunt, London Division.

ROYAL MARINES

COMMANDANT GENERAL.—The Commandant General Royal Marines, General Sir Campbell Hardy, left the United Kingdom on 25th June to visit units of the 3rd Commando Brigade in Malta and Cyprus, and to attend the unveiling on 4th July of the 3rd Commando Brigade Memorial in Malta.

YOUTH ENTRY.—A new system of entry into the Royal Marines between the ages of 16 and 17 will be started in September. In addition to the normal recruit training they will receive specialist and leadership training with the aim of fitting them to be non-commissioned officers at an early stage in their careers. Adult entry between 17 and 28 remains open.

GUNNERY SCHOOL CLOSED.—Because of the increasing number of smaller ships which do not need Royal Marines to man their guns, the R.M. Gunnery School at Eastney Barracks was closed at the end of June and the training transferred to H.M.S. *Excellent*, Whale Island.

HIMALAYAN EXPEDITION.—The British-Pakistan Joint Services Expedition left England in April for the Himalayas, led by Captain M. E. B. Banks, R.M., and including Captain R. H. Grant, R.M. On 25th June, Captain Banks and Surgeon Lieutenant T. W. Patey, R.N., climbed Rakaposhi, the 26,600-foot peak in the Karadoram.

DEMONSTRATION.—The demonstration "Runaground IX," which included the use of helicopters in a commando troop assault behind the beaches, was held from 16th to 22nd May at Portsmouth, attended by students from all the Staff Colleges.

HALF-YEARLY PROMOTIONS.—The following were announced to date 30th June :—

Major to Lieutenant-Colonel.—P. Beeman, D.S.C.

Captain to Major.—R. Master-Curtis, B. E. Darby, K. E. Light, J. F. Showell-Rogers. R.M. Forces Volunteer Reserve : *Major to Lieutenant-Colonel.*—E. Burke.

Captain to Major.—B. B. Ramsden.

CANADA

HALF-YEARLY PROMOTIONS.—The following have been announced by the Department of National Defence, Royal Canadian Navy, Ottawa, to be effective 1st July, 1958 :—

Executive Branch : Commander to Captain.—R. M. Steele, A. D. McPhee, R. W. Timbrell.

Engineering Branch : Commander to Captain.—C. G. H. Daniel.

Royal Canadian Navy (Reserve)—Executive Branch : Commander to Captain.—A. R. Webster, J. H. Stevenson.

Electrical Branch : Commander to Captain.—D. F. Mason.

Instructor Branch : Instructor Commander to Instructor Captain.—E. D. Walker.

Medical Branch : Surgeon Commander to Surgeon Captain.—J. W. A. Duckworth
C. M. Harlow.

Supply and Secretariat Branch : Commander to Captain.—J. W. Goodchild.

Special Branch : Commander to Captain.—J. B. Mawdsley.

AUSTRALIA

HALF-YEARLY PROMOTIONS.—The Australian Commonwealth Navy Board have announced the following to date 30th June, 1958 :—

Seaman Specialists : Commander to Captain.—H. D. Stevenson.

Engineer Specialists : Commander to Captain.—B. W. Mussared.

Medical Branch : Surgeon Commander to Surgeon Captain.—K. C. Armstrong.

SOUTH AFRICA

ARMAMENT DEPOT TRANSFERRED.—The Royal Naval Armament Depot at Ganspan was officially transferred to the Union Government on 31st March by the United Kingdom High Commissioner, Sir Percivale Leisching. The Minister of Defence, Mr. Erasmus, said that the Union Government regarded the price of £525,000 as reasonable for the valuable buildings and equipment in the depot.

EAST AFRICA

GIFT OF MINESWEEPER.—A proposal by the Board of Admiralty to make a gift of the inshore minesweeper *Bassingham* to the Government of East Africa was the subject of a Treasury Minute published as a White Paper on 16th April. For some years the Royal East African Navy had had on loan from the Royal Navy the coal-burning minesweeping trawler *Rosalind*, which is now nearing the end of her useful life. The Admiralty has therefore thought it reasonable to suggest that the *Bassingham*, complete with a first outfit of stores, should be given to the East African Government, to enable the Royal East African Navy to develop its potential ability to contribute not only to territorial and internal security but also to Commonwealth defence generally.

INDIA

HONORARY VICE-ADMIRAL.—On handing over the post of Chief of Naval Staff at the Naval Headquarters in Delhi on 21st April, Vice-Admiral Sir Stephen Carlill, K.B.E., C.B., D.S.O., was made an Honorary Vice-Admiral in the Indian Navy. His successor is Vice-Admiral Ram Dass Katari, who is the first Indian officer to be Chief of Naval Staff.

NEW FRIGATES.—The first modern Type 41 frigate, and the first major warship to be built by Britain for the Indian Navy since India achieved independence, was commissioned on 31st March at the yard of John Brown & Company, Clydebank. She is the *Brahmaputra*, and proceeded to Plymouth to work up before going East. Another new frigate, the *Trishul*, the third to be launched under the new construction programme, took the water on 18th June at the shipyard of Harland & Wolff, Belfast.

PAKISTAN

R.N. DESTROYER TRANSFERRED.—The last of the five ships purchased by the Pakistan Navy at the end of 1956 was handed over by Vice-Admiral Sir Gordon Hubback, Fourth Sea Lord and Vice-Controller, at a ceremony at Southampton on 20th June. She is the *Creole*, and was renamed P.N.S. *Alamgir*.

BURMA

R.N. MINESWEEPER TRANSFERRED.—The ocean minesweeper *Mariner* was transferred to the Burmese Navy at a ceremony at Tower Pier in the Pool of London on 18th April by Admiral of the Fleet Lord Mountbatten, First Sea Lord. She was renamed *Yan Myo Aung*.

MALAYA

BASE AT PORT SWETTENHAM.—The Commonwealth Relations Office announced on 1st July that Britain is to make a cash grant of £125,000 for the purchase of naval stores and equipment and to contribute £787,000 towards the cost of constructing a new base for the Royal Malayan Navy. It is to be at Port Swettenham, the harbour for Kuala Lumpur, capital of the Federation of Malaya. It has also been agreed that the Royal Malayan Navy, hitherto based at Singapore and administered and paid for by the Singapore Government since its creation in 1952, should be transferred to the Federation of Malaya.

FOREIGN

CHILE

NEW DESTROYER.—The *Almirante Williams*, first of two destroyers for the Chilean Navy ordered in 1955 from Vickers-Armstrongs (Shipbuilders) Limited, was launched at Barrow-in-Furness on 5th May.

DENMARK

VISIT OF COMMANDER-IN-CHIEF.—Vice-Admiral A. H. Vedel, Commander-in-Chief of the Royal Danish Navy, arrived in London on 18th May on a short visit to England.

GERMANY

BRITISH MISSION.—The Admiralty has agreed to lend to the German Federal Navy a mission of officers and ratings of the Royal Navy to advise on the problems of establishing the German Naval Air Arm. Two officers, Commander E. M. Brown and Commander R. C. R. Hallett, are already at the Naval Air Headquarters at Kiel-Holtenau, and will be joined by two more officers and five ratings when the German naval air squadrons now training in this country leave the United Kingdom.

NEW AIR SQUADRONS.—The first two of the German air squadrons formed in May. A multi-purpose squadron was formally commissioned on 19th May at the R.N. Air Station, Lossiemouth, Morayshire, and an anti-submarine squadron at the R.N. Air Station, Eglinton, near Londonderry, on 20th May. They are to fly Sea Hawk day interceptor fighters and Fairey Gannet anti-submarine aircraft.

VISIT OF DARTMOUTH SQUADRON.—On the conclusion of a three-day visit of H.M. Ships *Vigilant*, *Venus*, and *Roebuck* to the Federal German Naval College at Flensburg towards the end of May, Rear-Admiral Von Wangenheim, commanding the College, embarked with 160 German midshipmen and cadets for a day's exercises on passage to Kiel.

FIRST DESTROYER.—The first destroyer of the Federal Navy was received officially at Bremerhaven on 14th April. Known as the Z.1, she was formerly the *Anthony* and has been lent from the 'mothball' fleet of the U.S. Navy. With a displacement of 2,750 tons, she is West Germany's biggest warship.

TURKEY

PURCHASE OF DESTROYERS.—The Grand National Assembly at Istanbul has approved an agreement with Great Britain whereby four British destroyers are to be sold to Turkey for £2,980,000, payable in five years after 1968 at 5 per cent. interest.

UNITED STATES

SOUTH ATLANTIC FORCE.—Admiral Jerauld Wright, U.S.N., Commander-in-Chief U.S. Atlantic Fleet, has announced the formation from 1st June of an American South Atlantic Force, to be responsible for U.S. naval tasks in the area consisting principally of all of the South Atlantic Ocean. Rear-Admiral E. C. Stephan, U.S.N., is in command, and the permanent duty station of the staff of his force will be the U.S. naval station at Trinidad. Initially, the 2,650-ton destroyer *Jonas Ingram* will be assigned as flagship.

C.-IN-C., PACIFIC.—President Eisenhower has nominated Admiral Harry D. Felt, Vice-Chief of Naval Operations, as United States Commander-in-Chief in the Pacific, in succession to Admiral Felix B. Stump, who was due to retire on 1st August.

ATOMIC SUBMARINES.—Admiral Arleigh A. Burke, Chief of Naval Operations, announced on 26th May that the American atomic submarines *Skate* and *Seawolf* had set up endurance records of 30 days under water. Both vessels, with a total of 160 men on board, travelled 8,000 statute miles under water during training operations which ended on 23rd May.

LOAN OF H.M.S. SPRAT.—The Royal Navy midget submarine *Sprat* has been lent to the U.S. Navy, and was loaded on board the U.S.S. *Alcor* at Portsmouth on 20th June for shipment to America, together with her operational and passage crew consisting of Lieutenant T. J. Anderson, R.N., in command, two other officers, and six ratings.

ARMY NOTES

GREAT BRITAIN

H.M. THE QUEEN

The Queen, accompanied by the Duke of Edinburgh, visited the Royal Army Ordnance Corps, of which Her Majesty is Colonel-in-Chief, at Blackdown on 11th April.

The Queen, accompanied by the Duke of Edinburgh, visited the Staff College, Camberley, on 23rd April.

The Queen, as Captain-General of the Royal Regiment of Artillery, visited the Royal Artillery Display at Woolwich on 22nd May.

The Queen, accompanied by the Duke of Edinburgh (Colonel, Welsh Guards) and the Duke of Gloucester (Colonel, Scots Guards), was present at The Queen's Birthday Parade on the Horse Guards Parade on 12th June.

The Queen, accompanied by the Duke of Edinburgh, attended the Territorial Army Golden Jubilee Review in Hyde Park on 22nd June. Her Majesty inspected the Parade and took the Salute at the March Past.

The Queen, accompanied by the Duke of Edinburgh, attended the Territorial Army Jubilee Review in The Queen's Park, Edinburgh, on 5th July, and after inspecting the Parade took the Salute at the March Past.

Queen Elizabeth the Queen Mother, Colonel-in-Chief, The Manchester Regiment, was present at the Regiment's Bicentenary Celebrations at Warley Barracks, Brentwood, on 22nd April.

Queen Elizabeth the Queen Mother, Colonel-in-Chief, Royal Army Medical Corps, was present at the Diamond Jubilee Thanksgiving Service of the Corps in Westminster Abbey on 24th June.

The Duke of Edinburgh visited the 1st Battalion, Welsh Guards, at Pirbright on 16th April.

The Duke of Edinburgh, as Colonel-in-Chief, visited the 1st Battalion, The Queen's Own Cameron Highlanders, at Thetford, Norfolk, on 26th June.

The Princess Margaret, Colonel-in-Chief, The Suffolk Regiment, visited the 4th, T.A., Battalion of the Regiment at Benacre Hall, Wrentham, on 3rd June.

The Duke of Gloucester, as Colonel of the Regiment, inspected the 1st Battalion, Scots Guards, at Victoria Barracks, Windsor, on 2nd May.

The Duke of Gloucester visited the 42nd Field Regiment, Royal Artillery, and the Infantry Junior Leaders Battalion at Plymouth on 7th May.

The Duke of Gloucester visited military units at Larkhill and Aldershot on 8th May, and the 1st Battalion, The Rifle Brigade (Prince Consort's Own), and the Queen's Bays (2nd Dragoon Guards) at Tidworth on 9th May.

The Duke and Duchess of Gloucester were present at the Service of Thanksgiving for the Golden Jubilee of the Territorial Army which was held in Westminster Abbey on 21st June.

The Princess Royal, Controller Commandant, Women's Royal Army Corps, visited the W.R.A.C. Depot at Guildford on 27th April, and units of the Corps in Salisbury Plain District, Southern Command, on 9th May.

Princess Alexandra of Kent, as Colonel-in-Chief of the Regiment, inspected the Bicentenary Parade of The Durham Light Infantry at Brancepeth Castle on 17th May.

The Queen has been graciously pleased to approve the following appointments:—

H.R.H. the Princess Margaret to be Colonel-in-Chief of The Royal Highland Fusiliers (Princess Margaret's Own Glasgow and Ayrshire Regiment), the Regiment to

be formed by the amalgamation of The Royal Scots Fusiliers and The Highland Light Infantry (City of Glasgow Regiment). The appointment will take effect from the date of the amalgamation.

AIDE-DE-CAMP (GENERAL) TO THE QUEEN.—General Sir Francis W. Festing, G.C.B., K.B.E., D.S.O. (26th June, 1958), vice General Sir George W. E. J. Erskine, G.C.B., K.B.E., D.S.O., A.D.C., tenure expired.

TO BE AIDES-DE-CAMP TO THE QUEEN.—Brigadier C. A. I. Suther, O.B.E. (9th February, 1958), vice Brigadier R. N. M. Jones, C.B.E., retired; Brigadier C. E. L. S. Dawson, O.B.E., A.M.I.Mech.E. (14th April, 1958), vice Brigadier A. R. Purches, C.B.E., A.M.I.Mech.E., retired; Colonel (Honorary Brigadier) R. N. Hanbury, C.B.E., T.D., D.L. (30th May, 1958); Colonel (Honorary Brigadier) L. C. Dunn, T.D. (30th May, 1958); Brigadier R. T. Priest, O.B.E. (11th June, 1958), vice Brigadier T. C. Usher, C.B.E., D.S.O., retired.

TO BE HONORARY PHYSICIAN TO THE QUEEN.—Colonel J. B. George, M.B., D.O.M.S. (2nd May, 1958), vice Major-General D. Bluett, C.B., O.B.E., M.B., retired.

TO BE COLONELS COMMANDANT.—Of the Corps of Royal Engineers, Major-General Sir A. Douglas Campbell, K.B.E., C.B., D.S.O., M.C., M.A. (8th June, 1958), vice Major-General (Honorary Lieut.-General) Sir Ronald Scobie, K.B.E., C.B., M.C., tenure expired; of the Aden Protectorate Levies, Major-General C. C. L. Firbank, C.B., C.B.E., D.S.O. (9th May, 1958).

TO BE COLONELS OF REGIMENTS.—Of the 4th/7th Royal Dragoon Guards, Lieut.-Colonel R. A. Moulton-Barrett, O.B.E. (6th June, 1958), vice Colonel (Honorary Major-General) J. A. Aizlewood, M.C., tenure expired; of the Royal Regiment of Artillery, Lieut.-General Sir Roderick W. McLeod, K.C.B., C.B.E. (24th June, 1958), vice Major-General (Honorary Lieut.-General) Sir Frederick E. Morgan, K.C.B., tenure expired; of The Devonshire and Dorset Regiment, on formation, Major-General G. N. Wood, C.B., C.B.E., D.S.O., M.C. (17th May, 1958); of The Prince of Wales's Own Regiment of Yorkshire, on formation, Brigadier R. J. Springhall, C.B., O.B.E. (25th April, 1958); of The Gordon Highlanders, Brigadier the Earl of Caithness, C.B.E., D.S.O. (14th June, 1958), vice Colonel W. J. Graham, M.C., tenure expired.

ARMY COUNCIL

The Queen has been pleased by Letters Patent under the Great Seal bearing date the 1st day of May, 1958, to appoint the following to be Her Majesty's Army Council:—

Captain the Rt. Hon. A. C. J. Soames, C.B.E.—*President*.

Captain H. J. Amery—*Vice-President*.

Field-Marshal Sir Gerald W. R. Templer, G.C.B., G.C.M.G., K.B.E., D.S.O.

General Sir Charles F. Loewen, G.C.B., K.B.E., D.S.O., A.D.C.

General Sir Nevil C. D. Brownjohn, G.B.E., K.C.B., C.M.G., M.C., A.D.C.

Lieut.-General Sir William H. Stratton, K.C.B., C.V.O., C.B.E., D.S.O.

Lieut.-General Sir Harold E. Pyman, K.C.B., C.B.E., D.S.O.

Sir Edward W. Playfair, K.C.B.

HONOURS AND AWARDS

GEORGE CROSS.—It was announced on 17th June that The Queen had been graciously pleased to approve the posthumous award of the George Cross to:—

Second Lieutenant Michael Paul Benner, Corps of Royal Engineers,
in recognition of great gallantry in Austria during the summer of 1957.

BIRTHDAY HONOURS.—The following were included in The Queen's Birthday Honours List :—

K.C.B.—Lieut.-General R. W. McLeod, C.B., C.B.E.

C.B.—Major-General F. H. Brooke, C.B.E., D.S.O.; Brigadier M. P. D. Dewar, C.B.E.; Brevet and acting Colonel M. St. J. V. Gibbs, D.S.O., T.D.; Major-General F. W. S. Gordon-Hall, C.B.E.; Major-General St. J. C. Hooley, C.B.E.; Major-General J. Huston, Q.H.S., M.B., F.R.C.S.; Major-General R. F. Johnstone, C.B.E.; Major-General A. G. V. Paley, C.B.E., D.S.O.; Colonel A. S. Pearson, D.S.O., O.B.E., M.C., T.D., A.D.C., D.L.; Colonel W. J. M. Ross, O.B.E., M.C., T.D.; Major-General E. D. Howard-Vyse, C.B.E., M.C.

K.B.E.—Lieut.-General J. G. Cowley, C.B., C.B.E., A.M.; Major-General L. E. Cutforth, C.B., C.B.E.

R.R.C. (First Class).—Lieut.-Colonel Margaret B. Kneebone, Q.A.R.A.N.C.

APPOINTMENTS

MINISTRY OF SUPPLY.—Brigadier H. M. Liardet, C.B.E., D.S.O., M.C., appointed Director-General of Fighting Vehicles, with the temporary rank of Major-General (8th June, 1958).

WAR OFFICE.—Major-General R. H. Hewetson, C.B., C.B.E., D.S.O., appointed President, The Special Board, War Office (1st June, 1958).

Major-General J. D'A. Anderson, C.B., C.B.E., D.S.O., appointed Director, Royal Armoured Corps (August, 1958).

UNITED KINGDOM.—Brigadier H. E. Knott, O.B.E., M.D., D.P.H., appointed Deputy Director of Medical Services, with the temporary rank of Major-General (4th April, 1958).

Lieut.-General Sir C. Douglas Packard, K.B.E., C.B., D.S.O., appointed G.O.C., Northern Ireland District (July, 1958).

GERMANY.—Brigadier C. G. Lipscomb, D.S.O., appointed Chief of Joint Services Liaison Staff, Joint Services Liaison Organization, B.A.O.R., with the temporary rank of Major-General (15th July, 1958).

WEST AFRICA.—Major-General K. G. Exham, C.B., D.S.O., lent for duty with the Nigerian Military Forces, ceasing to be remunerated from Army Funds (1st April, 1958).

S.H.A.P.E.—Brigadier C. H. Tarver, D.S.O., appointed Assistant Chief of Staff (Intelligence), with the temporary rank of Major-General (31st May, 1958).

ALLIED FORCES, NORTHERN EUROPE.—Lieut.-General Sir Horatius Murray, K.B.E., C.B., D.S.O., appointed C-in-C. (1st July, 1958).

PROMOTIONS

Lieut.-General.—Temporary Lieut.-General to be Lieut.-General :—M. M. A. R. West, C.B., D.S.O. (20th March, 1958).

Major-General to be temporary Lieut.-General.—R. G. Collingwood, C.B., C.B.E., D.S.O. (1st May, 1958).

Major-Generals.—Temporary Major-Generals or Brigadiers to be Major-Generals :—A. F. J. Elmslie, C.B.E., A.M.I.Mech.E. (14th March, 1958); G. Peddie, D.S.O., M.B.E. (20th March, 1958); H. A. Borradaile, D.S.O. (29th March, 1958); J. C. D'A. Dalton, C.B., C.B.E. (27th April, 1958); W. D. Hughes, C.B.E., Q.H.P., M.D., F.R.C.P. (2nd May, 1958); G. T. L. Archer, Q.H.S., M.B., M.R.C.P. (2nd May, 1958); P. J. L. Capon, Q.H.P., M.R.C.S., L.R.C.P., D.P.H. (2nd May, 1958); B. D. Jones, C.B.E. (20th May, 1958).

Brigadiers or Colonels to be temporary Major-Generals.—H. E. Knott, O.B.E., M.D., D.P.H. (4th April, 1958); E. S. Cole, C.B.E. (15th April, 1958); J. A. R. Robertson,

C.B., C.B.E., D.S.O. (4th May, 1958); G. A. Thomas, C.B.E., A.D.C. (24th May, 1958); C. H. Tarver, D.S.O. (31st May, 1958); D. E. B. Talbot, C.B.E., D.S.O., M.C. (7th June, 1958); H. M. Liardet, C.B.E., D.S.O., M.C. (8th June, 1958); C. G. Lipscomb, D.S.O. (15th July, 1958).

RETIREMENTS

The following General Officers have retired:—Major-General C. B. Fairbanks, C.B., C.B.E. (27th April, 1958); Major-General D. Bluett, C.B., O.B.E., Q.H.P., M.B. (2nd May, 1958); Major-General L. E. Cutforth, C.B., C.B.E. (20th May, 1958); Major-General J. M. K. Spurling, C.B., C.B.E., D.S.O. (21st June, 1958); Major-General B. P. Hughes, C.B., C.B.E. (2nd July, 1958); Major-General R. P. Harding, C.B., D.S.O. (5th July, 1958); Major-General F. W. S. Gordon-Hall, C.B., C.B.E. (6th July, 1958).

BATTLE HONOURS

The following is the seventh list of Battle Honours approved by The Queen for the 1939-45 War. The Battle Honours selected to be borne on Colours and Appointments are shown in bold print.

8TH KING'S ROYAL IRISH HUSSARS.—"Villers Bocage," "Mont Pincon," "Dives Crossing," "Nederrijn," "Best," "Lower Maas," "Roer," "Rhine," "North-West Europe, 1944-45," "Egyptian Frontier, 1940," "Sidi Barrani," "Buq Buq," "Sidi Rezegh, 1941," "Relief of Tobruk," "Gazala," "Bir el Igela," "Mersa Matruh," "Alam el Halfa," "El Alamein," "North Africa, 1940-42."

10TH ROYAL HUSSARS (PRINCE OF WALES'S OWN).—"Somme, 1940," "North-West Europe, 1940," "Saunnu," "Gazala," "Bir el Aslagh," "Alam el Halfa," "El Alamein," "El Hamma," "El Kourzia," "Djebel Kournine," "Tunis," "North Africa, 1942-43," "Coriano," "Santarcangelo," "Cosina Canal Crossing," "Senio Pocket," "Cesena," "Valli di Commacchio," "Argenta Gap," "Italy, 1944-45."

THE ROYAL INNISKILLING FUSILIERS.—"Defence of Arras," "Ypres-Comines Canal," "North-West Europe, 1940," "Two Tree Hill," "Bou Arada," "Oued Zarga," "Djebel Bel Mahdi," "Djebel Tanngoucha," "North Africa, 1942-43," "Landing in Sicily," "Solarino," "Simeto Bridgehead," "Adrano," "Centuripe," "Simeto Crossing," "Pursuit to Messina," "Sicily, 1943," "Termoli," "Trigno," "San Salvo," "Sangro," "Garigliano Crossing," "Minturno," "Anzio," "Cassino II," "Massa Tambourini," "Liri Valley," "Rome," "Advance to Tiber," "Trasimene Line," "Monte Spaduro," "Argenta Gap," "Italy, 1943-45," "Middle East, 1942," "Yenangyaung, 1942," "Donbaik," "Burma, 1942-43."

THE BORDER REGIMENT.—"Defence of Escaut," "Dunkirk, 1940," "Somme, 1940," "Arnhem, 1944," "North-West Europe, 1940, '44," "Tobruk, 1941," "Landing in Sicily," "Imphal," "Sakawng," "Tamu Road," "Shenam Pass," "Kohima," "Ukhrul," "Mandalay," "Myinmu Bridgehead," "Meiktila," "Rangoon Road," "Pyawbwe," "Sittang, 1945," "Chindits, 1944," "Burma, 1943-45."

THE LOYAL REGIMENT (NORTH LANCASHIRE).—"Dunkirk, 1940," "North-West Europe, 1940," "Banana Ridge," "Djebel Kesskiss," "Medjez Plain," "Gueriat el Atach Ridge," "Djebel Bou Aoukaz, 1943, I," "Gab Gab Gap," "North Africa, 1943," "Anzio," "Rome," "Fiesole," "Gothic Line," "Monte Gamberaldi," "Monte Ceco," "Monte Grande," "Italy, 1944-45," "Johore," "Batu Pahat," "Singapore Island," "Malaya, 1941-42."

THE NORTHAMPTONSHIRE REGIMENT.—"Defence of Escaut," "Defence of Arras," "Ypres-Comines Canal," "North-West Europe, 1940, '45," "Djedeida," "Djebel Djaffa," "Oued Zarga," "Djebel Tanngoucha," "Sidi Ahmed," "North Africa, 1942-43," "Landing in Sicily," "Adrano," "Sicily, 1943," "Sangro," "Garigliano Crossing," "Anzio," "Cassino II," "Monte Gabbione," "Trasimene Line," "Monte La Pieve," "Argenta Gap," "Italy, 1943-45," "Madagascar," "Yu," "Imphal,"

"Tamu Road," "Bishenpur," "Monywa, 1945," "Myinmu Bridgehead," "Irrawaddy," "Burma, 1943-45."

THE KING'S SHROPSHIRE LIGHT INFANTRY.—"Defence of Escaut," "Dunkirk, 1940," "Normandy Landing," "Odon," "Caen," "Bourguebus Ridge," "Troarn," "Mont Pincon," "Souleuvre," "Le Perier Ridge," "Falaise," "Antwerp," "Nederrijn," "Venraij," "Rhineland," "Hochwald," "Ibbenburen," "Lingen," "Aller," "Bremen," "North-West Europe, 1940, '44-45," "Gueriat el Atach Ridge," "Tunis," "Djebel Bou Aoukaz, 1943, II," "North Africa, 1943," "Anzio," "Campoleone," "Carroceto," "Gothic Line," "Monte Ceco," "Monte Grande," "Italy, 1943-45."

THE QUEEN'S OWN CAMERON HIGHLANDERS.—"Defence of Escaut," "St. Omer-La Basse," "Somme, 1940," "St. Valery-en-Caux," "Falaise," "Falaise Road," "La Vie Crossing," "Le Havre," "Lower Maas," "Venlo Pocket," "Rhineland," "Reichswald," "Goch," "Rhine," "North-West Europe, 1940, '44-45," "Agordat," "Keren," "Abyssinia, 1941," "Sidi Barrani," "Tobruk, 1941, '42," "Gubi II," "Carmusa," "Gazala," "El Alamein," "Mareth," "Wadi Zigzaou," "Akarit," "Djebel Roumana," "North Africa, 1940-43," "Francofonte," "Adrano," "Sferro Hills," "Sicily, 1943," "Cassino I," "Poggio del Grillo," "Gothic Line," "Tavoleto," "Coriano," "Pian di Castello," "Monte Reggiano," "Rimini Line," "San Marino," "Italy, 1944," "Kohima," "Relief of Kohima," "Naga Village," "Aradura," "Shwebo," "Mandalay," "Ava," "Irrawaddy," "Mt. Popa," "Burma, 1944-45."

6TH GURKHA RIFLES.—"Coriano," "Santarcangelo," "Monte Chicco," "Lamone Crossing," "Senio Floodbank," "Medicina," "Gaiana Crossing," "Italy, 1944-45," "Shwebo," "Kyaukmyaung Bridgehead," "Mandalay," "Fort Dufferin," "Maymyo," "Rangoon Road," "Toungoo," "Sittang, 1945," "Chindits, 1944," "Burma, 1944-45."

THE HEREFORDSHIRE LIGHT INFANTRY, T.A.—"Odon," "Defence of Rauray," "Bourguebus Ridge," "Cagny," "Mont Pincon," "Souleuvre," "Falaise," "Antwerp," "Hechtal," "Venraij," "Venlo Pocket," "Rhineland," "Hochwald," "Ibbenburen," "Aller," "North-West Europe, 1944-45."

THE KING'S AFRICAN RIFLES.—"Afodu," "Gambela," "Moyale," "Todenyang-Namuraputh," "Soroppa," "Juba," "Beles Gugani," "Awash," "Fike," "Colito," "Omo," "Gondar," "Ambazzo," "Kulkaber," "Abyssinia, 1940-41," "Tug Argan," "British Somaliland," "Madagascar," "Middle East, 1942," "Mawlaik," "Kalewa," "Seikpyu," "Letse," "Arakan Beaches," "Taungup," "Burma, 1944-45."

THE SINGAPORE VOLUNTEER CORPS.—"Singapore Island," "Malaya, 1942."

NEW REGIMENTAL TITLES

Her Majesty The Queen has approved the titles of the following Regiments to be created by amalgamation:—

| <i>Regiments Amalgamating</i> | <i>Titles</i> |
|--|-----------------------------------|
| ROYAL ARMoured CORPS | |
| 1st King's Dragoon Guards. | } 1st The Queen's Dragoon Guards. |
| The Queen's Bays (2nd Dragoon Guards). | |
| 3rd The King's Own Hussars. | |
| 7th Queen's Own Hussars. | |
| 4th Queen's Own Hussars. | |
| 8th King's Royal Irish Hussars. | |
| 3rd Royal Tank Regiment. | |
| 6th Royal Tank Regiment. | |
| 4th Royal Tank Regiment. | } 3rd Royal Tank Regiment. |
| 7th Royal Tank Regiment. | |
| 5th Royal Tank Regiment. | |
| 8th Royal Tank Regiment. | |
| | } 4th Royal Tank Regiment. |
| | |
| | } 5th Royal Tank Regiment. |
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INFANTRY OF THE LINE

| | | |
|---|---|---|
| The Queen's Royal Regiment (West Surrey). | } | The Queen's Royal Surrey Regiment. |
| The East Surrey Regiment. | | The King's Own Royal Border Regiment. |
| The King's Own Royal Regiment (Lancaster). | } | The King's Regiment (Manchester and Liverpool). |
| The Border Regiment. | | 1st East Anglian Regiment (Royal Norfolk and Suffolk). |
| The King's Regiment (Liverpool). | } | 2nd East Anglian Regiment (Royal 10th/48th Foot). |
| The Manchester Regiment. | | The Devonshire and Dorset Regiment, <i>formed 17th May, 1958.</i> |
| The Royal Norfolk Regiment. | } | 3rd East Anglian Regiment (16th/44th Foot), <i>formed 2nd June, 1958.</i> |
| The Suffolk Regiment. | | The Prince of Wales's Own Regiment of Yorkshire, <i>formed 25th April, 1958.</i> |
| The Royal Lincolnshire Regiment. | } | The Royal Highland Fusiliers (Princess Margaret's Own Glasgow and Ayrshire Regiment). |
| The Northamptonshire Regiment. | | The Lancashire Regiment (Prince of Wales's Volunteers). |
| The Devonshire Regiment. | } | The Staffordshire Regiment (The Prince of Wales's). |
| The Dorset Regiment. | | 1st Green Jackets, 43rd and 52nd. |
| The Bedfordshire and Hertfordshire Regiment. | } | The Duke of Edinburgh's Royal Regiment (Berkshire and Wiltshire). |
| The Essex Regiment. | | 2nd Green Jackets, The King's Royal Rifle Corps. |
| The West Yorkshire Regiment (The Prince of Wales's Own). | } | 3rd Green Jackets, The Rifle Brigade. |
| The East Yorkshire Regiment (The Duke of York's Own). | | |
| The Royal Scots Fusiliers. | } | |
| The Highland Light Infantry (City of Glasgow Regiment). | | |
| The East Lancashire Regiment. | } | |
| The South Lancashire Regiment (The Prince of Wales's Volunteers). | | |
| The South Staffordshire Regiment. | } | |
| The North Staffordshire Regiment (The Prince of Wales's). | | |
| The Oxfordshire and Buckinghamshire Light Infantry. | } | |
| The Royal Berkshire Regiment. | | |
| (Princess Charlotte of Wales's). | } | |
| The Wiltshire Regiment (Duke of Edinburgh's). | | |
| The King's Royal Rifle Corps. | | |

The Rifle Brigade (Prince Consort's Own).

NEW NAME FOR THE MIDLAND BRIGADE

The War Office has announced that the Midland Brigade in which are grouped The Royal Warwickshire Regiment, The Royal Leicestershire Regiment, and The Sherwood Foresters (Nottinghamshire and Derbyshire Regiment) is to be renamed The Forester Brigade.

INCREASE IN VOLUNTEERS FOR THE TERRITORIAL ARMY

Comparison of the strengths of the Reserve and Auxiliary Forces on 31st December, 1957, and 31st March, 1958, shows an increase of Territorial Army normal volunteers from 64,734 to 69,562. The total strength of the T.A. on 31st March was 247,128.

MISCELLANEOUS

NEW STANDARD FOR DRAGOONS.—Field-Marshal Sir Gerald Templer presented a new Standard to the 4th/7th Royal Dragoon Guards at Fallingbowl, near Hanover, on 22nd May. Since the amalgamation of the 4th Royal Irish Dragoon Guards and the 7th Dragoon Guards (Princess Royal's) in 1922, the combined Regiment had retained both the old Standards.

"SABOTAGE" EXERCISE.—About 100 Territorials of the Special Air Service Regiment landed by parachute in the Danish island of Fyn on 24th May. The inhabitants

were alerted and Regular troops and Home Guards took part in the exercise in an endeavour to round up the parachutists. 'Prisoners of war' were questioned by Danish security police.

MALACCA CANTONMENT.—The foundation stone of the Malacca Cantonment, which will accommodate the Commonwealth Brigade Group, the Strategic Reserve in the Far East, was laid by General Sir Francis Festing, C.-in-C., Far East Land Forces, on 17th June. The site for the project was confirmed under the Malayan Defence Agreement.

GURKHA RECRUITING.—The agreement under which Britain maintains a Gurkha recruiting depot at Dharan Bazar in Nepal has been renewed for a further 10 years.

CANADA

APPOINTMENTS

Major-General S. F. Clark, C.B.E., C.D., appointed Chief of the General Staff and promoted to the rank of Lieut.-General.

Major-General H. A. Sparling, C.B.E., D.S.O., C.D., appointed G.O.C., Central Command.

Major-General J. D. B. Smith, C.B.E., D.S.O., C.D., appointed Adjutant General.

Major-General G. Kitching, C.B.E., D.S.O., C.D., appointed Chairman, Canadian Joint Staff, London.

AUSTRALIA

BIRTHDAY HONOURS.—The following was included in The Queen's Birthday Honours List :—

C.B.—Major-General R. J. H. Risson, C.B.E., D.S.O., E.D.

APPOINTMENT.—Brigadier P. P. Jackson has been appointed Inter-Service Technical Officer, Australian Joint Services Staff, London.

UNIVERSITY TRAINING COURSES.—In view of the need of personnel for scientific and technical work in a modern army, an arrangement has been made by which 38 officers and 74 other ranks of the Regular Army are commencing courses this year at universities, technical colleges, hospitals, and health departments. The courses range from full-time university study for degree qualification of up to three years' duration to own-time study of a few months. Full-time university courses for selected officers include degrees in science, various branches of engineering, and a diploma of tropical medicine and hygiene.

NEW ZEALAND

BIRTHDAY HONOURS.—The following were included in The Queen's Birthday Honours List :—

K.B.E.—Major-General W. G. Gentry, C.B., C.B.E., D.S.O.; Major-General K. L. Stewart, C.B., C.B.E., D.S.O.

ARMY REORGANIZATION.—It was reported on 27th June that the Army will be reorganized as follows : (a) an establishment force of 2,500 ; (b) an operational Regular brigade group, including an armoured regiment, with a strength of approximately 5,600 ; and (c) a volunteer territorial force with an estimated strength of 7,000.

AIR NOTES

H.M. THE QUEEN

ROYAL VISIT.—The Queen, accompanied by the Duke of Edinburgh, paid a brief visit to Lincoln Cathedral on 27th June, where Her Majesty unveiled a window in the Airmens' Chapel, commemorating all ranks of Flying Training Command who died during the war while stationed in Lincolnshire. The Royal party was received by the Bishop of Lincoln and the Dean of Lincoln.

On the following day, when Her Majesty visited Grimsby, 12 Canberras of No. 12 (Bomber) Squadron made a fly past. Ground crews of R.A.F. Binbrook and of No. 12 Squadron, which was granted the Marching Freedom of Grimsby on 11th September, 1954, formed a Guard of Honour, with bayonets fixed and Squadron Standard flying.

AIDE-DE-CAMP.—Air Commodore R. N. Bateson, D.S.O., D.F.C., is appointed Aide-de-Camp to The Queen in succession to Air Commodore R. C. Meade, C.B.E., D.F.C., A.F.C. (20th April, 1958).

HONOURS AND AWARDS

The honours conferred by The Queen on the occasion of Her Majesty's official birthday included the following:—

C.B.—Air Vice-Marshal H. R. Graham, C.B.E., D.S.O., D.F.C.; Acting Air Vice-Marshal L. M. Corbet, C.B.E., M.B., B.S., (Retd.); Air Commodore H. H. Chapman, C.B.E., A.M.I.E.E.; Air Commodore K. J. McIntyre, C.B.E., (Retd.); Air Commodore W. A. Stagg, C.B.E.; Air Commodore W. P. Sutcliffe, D.F.C.; Acting Air Commodore W. S. Gardner, O.B.E., D.F.C., A.F.C.; Acting Air Commodore J. A. Tester, C.B.E., (Retd.).

D.B.E.—Air Commandant A. M. Williamson, R.R.C., Q.H.N.S., Princess Mary's Royal Air Force Nursing Service; Air Commandant M. H. Barnett, C.B.E., A.D.C., W.R.A.F.

APPOINTMENTS

AIR MINISTRY.—Air Vice-Marshal S. O. Bufton, C.B., D.F.C., to be Assistant Chief of the Air Staff (Intelligence), succeeding Air Vice-Marshal W. M. Macdonald, C.B., C.B.E., D.F.C. (August, 1958); Air Commodore R. A. C. Carter, C.B., D.S.O., D.F.C., to be Director of Personal Services (A) (June, 1958); Air Commodore P. G. Wykeham, D.S.O., O.B.E., D.F.C., A.F.C., to be Director of Operations (Fighter and Theatre Air Forces) (12th May, 1958).

BOMBER COMMAND.—Air Commodore J. G. Davis, C.B., C.B.E., to be Senior Air Staff Officer with the acting rank of Air Vice-Marshal (June, 1958).

FIGHTER COMMAND.—Air Commodore H. J. Maguire, C.B., D.S.O., O.B.E., to be Senior Air Staff Officer, No. 11 Group (12th May, 1958).

TRANSPORT COMMAND.—Air Commodore C. Broughton, C.B.E., to be Senior Air Staff Officer (June, 1958).

MAINTENANCE COMMAND.—Air Vice-Marshal H. D. Jackman, C.B., C.B.E., to be Air Officer Commanding-in-Chief, with the acting rank of Air Marshal, in succession to Air Marshal Sir Richard Jordan, K.C.B., D.F.C. (5th May, 1958); Air Vice-Marshal D. W. R. Ryley, C.B., C.B.E., to be Air Officer in charge of Administration (1st July, 1958).

MIDDLE EAST AIR FORCE.—Air Commodore C. S. Moore, O.B.E., to be Air Officer in charge of Administration (July, 1958).

PROMOTIONS

Air Chief Marshal His Royal Highness The Duke of Gloucester, K.G., K.T., K.P., G.C.B., G.C.M.G., G.C.V.O., is promoted to the rank of Marshal of the Royal Air Force with effect from 12th June, 1958.

The following half-yearly promotions dated from 1st July, 1958 :—

GENERAL DUTIES BRANCH

Air Vice-Marshal to Air Marshal.—Sir Arthur W. B. McDonald, K.C.B., A.F.C. (acting Air Marshal); Sir Humphrey E. Jones, K.C.B., C.B.E., D.F.C., A.F.C. (acting Air Marshal).

Air Commodore to Air Vice-Marshal.—M. H. Dwyer, C.B.E.; T. A. B. Parselle, C.B.E.; J. Grandy, C.B., D.S.O. (acting Air Vice-Marshal).

Group Captain to Air Commodore.—J. R. Gordon-Finlayson, D.S.O., D.F.C.; J. D. Melvin, C.B., O.B.E.; C. M. Wight-Boycott, C.B.E., D.S.O.; C. H. Hartley, C.B.E., D.F.C., A.F.C.; T. O. Prickett, C.B., D.S.O., D.F.C.; R. B. Thomson, D.S.O., D.F.C.; W. E. Coles, C.B.E., D.S.O., D.F.C., A.F.C.; E. L. Colbeck-Welch, O.B.E., D.F.C.; J. H. Searby, D.S.O., D.F.C.

TECHNICAL BRANCH

Air Commodore to Air Vice-Marshal.—J. Marson, C.B., C.B.E., A.F.R.Ae.S. (acting Air Vice-Marshal).

Group Captain to Air Commodore.—D. N. Kington-Blair-Oliphant, O.B.E., B.A.; M. K. D. Porter, C.B.E.

EQUIPMENT BRANCH

Air Vice-Marshal to Air Marshal.—H. D. Jackman, C.B., C.B.E. (acting Air Marshal).

Air Commodore to Air Vice-Marshal.—E. N. Lowe, C.B., C.B.E., A.D.C. (acting Air Vice-Marshal).

Group Captain to Air Commodore.—H. W. Penney, C.B., C.B.E.

MEDICAL BRANCH

Air Commodore to Air Vice-Marshal.—G. A. M. Knight, C.B.E., M.B., B.S., D.L.O. (acting Air Vice-Marshal).

Group Captain to Air Commodore.—W. K. Stewart, C.B.E., A.F.C., B.Sc., M.B., Ch.B.; J. F. Dales, M.R.C.S., L.R.C.P.

DENTAL BRANCH

Air Commodore to Air Vice-Marshal.—R. Scoggins, C.B.E., L.D.S., Q.H.D.S. (acting Air Vice-Marshal).

Group Captain to Air Commodore.—H. Keggin, L.D.S.

RETIREMENTS

Air Vice-Marshal M. J. Pigott, C.B.E., B.D.S., F.D.S.R.C.S., Q.H.D.S. (1st April, 1958); Air Commodore P. Jones, C.B.E., M.I.E.E. (1st April, 1958); Air Commodore R. C. Meade, C.B.E., D.F.C., A.F.C. (20th April, 1958); Air Commodore L. M. Corbet, C.B.E., M.B., B.S. (24th April, 1958); Air Commodore P. H. Hamley, A.F.C. (3rd May, 1958); Air Marshal Sir Richard Jordan, K.C.B., D.F.C. (2nd June, 1958); Air Commodore D. W. Lane, C.B.E. (24th May, 1958); Air Commodore D. N. Roberts, C.B.E., A.F.C. (29th May, 1958).

PERSONNEL

RECRUITING.—More recruits signed on for nine years or longer in the R.A.F. in May than in any other month since the end of the war. Recruiting figures for May issued by the Ministry of Defence show that the R.A.F. attracted 575 long-term recruits, compared with a monthly average of 283 in the previous 12 months.

TRAINING

EXERCISE "EASTABOUT."—The Royal Air Force Flying College, Manby, carried out an interesting series of flights during April and May, 1958, when their Canberra P.R.7, Aries V, flew round the world. The aircraft, crewed by members of the Flying College staff, was scheduled to follow an all-Commonwealth route but headwinds necessitated a diversion to Honolulu on the leg from Christmas Island to Vancouver. During the exercise visits were paid to the Commonwealth Air Forces in Rhodesia, South Africa, Australia, New Zealand, and Canada. Two crews took part in the flight, Group Captain J. E. S. Morton, Assistant Commandant, captaining Aries V outward bound to Melbourne where Air Commodore P. H. Dunn, the Commandant, took over for the return to the United Kingdom via the Pacific and Canada.

The purpose of the exercise was to investigate world-wide operating and navigating techniques for jet-engined aircraft. It also enabled members of the Flying College staff to have valuable discussions on these and other operational and training matters with Commonwealth Air Force personnel in the countries visited. An overall distance of 28,593 statute miles was covered at an average speed of over 520 m.p.h. and the longest leg, from England to Nairobi (a distance of 4,189 statute miles), was completed in eight hours 18 minutes. This was the first time that a jet aircraft has flown non-stop to Kenya. No special ground-servicing organization was laid on for the flight except at Mauritius, where a small R.A.F. party was positioned. The aircraft left Manston (Kent) at midnight on 22nd April and, three weeks later, arrived back to Manby (Lincolnshire) ten minutes ahead of schedule.

NORTH AMERICAN VISIT.—Staff and students of No. 16 Specialist Navigation Course, R.A.F. Manby, accompanied by representatives of the Air Ministry, Flying Training, and Coastal Commands, and of the Royal Aircraft Establishment, visited Canada and the United States from 9th to 23rd May. The aircraft flown was a Transport Command Comet. With the object of studying current techniques and equipment of navigational and weapons interest, the party visited a number of Service establishments. These included the R.C.A.F. Central Experimental and Proving Establishment at Uplands; the R.C.A.F. Central Navigational School, Winnipeg; Wright-Patterson U.S.A.F. Base at Ohio; Eglin Air Force Base, Florida; and the U.S. Naval Station at Patuxent, Virginia.

"VULCAN'S" ATLANTIC CROSSINGS.—An Avro Vulcan of R.A.F. Bomber Command recently made Atlantic crossings in both directions at speeds of over 600 m.p.h. The aircraft took off from Waddington on 3rd June and was over Goose Bay, Labrador, four hours and two minutes later, having covered 2,432 statute miles at an average speed of 602 m.p.h. On the return crossing (10th June) the Vulcan took off from Westover, near Boston, and was over Waddington, a distance of 3,310 statute miles, in five hours 17 minutes, an average speed of 621 m.p.h.

PHYSIOLOGICAL PROBLEMS OF MODERN FLYING.—In view of the greater altitudes and speeds attained by R.A.F. aircraft, it has been decided to appoint specially trained officers of the General Duties (Flying) Branch to Commands concerned with high-altitude and high-speed flight to instruct aircrews in the use of specially designed pressurized equipment and suits and to see that they are properly fitted and worn. These officers will take up their posts after a period of training at the R.A.F. Institute of Aviation at Farnborough.

ORGANIZATION

FIRST BEVERLEY SQUADRON OVERSEAS.—No. 84 Squadron, Middle East Air Force, which has operated overseas since 1920, is now re-equipping with Blackburn Beverley aircraft. Based in Aden, where a detachment of R.A.F. Transport Command Beverleys has been operating for some months, this will be the first R.A.F. squadron of an overseas command to fly this large freighter-passenger aircraft.

GOSPORT AIRFIELD.—Gosport airfield's 44 years' association with flying development in the Royal Flying Corps, the Royal Naval Air Service, the Fleet Air Arm, and the

Royal Air Force ended on 28th May, 1958, when Air Chief Marshal Sir Arthur Longmore unveiled a memorial at H.M.S. *Sultan* (formerly R.A.F. Gosport) commemorating the close ties of this airfield with the development of Service aviation. Gosport was one of the first five airfields chosen for the Royal Flying Corps in 1912. In 1914 the first squadrons of the R.N.A.S. were based there under Air Chief Marshal (then Commander) Longmore. Three years later a R.F.C. School of Special Flying was formed. This in due course developed into the R.A.F. Central Flying School.

CLOSING OF R.A.F. MAINTENANCE UNITS.—As part of the contraction and reorganization of the R.A.F., five Aircraft Storage Units are to be closed. This will take place in 1959 and 1960. The units are: No. 47 Maintenance Unit, Hawarden, Cheshire; No. 10 M.U., Hullavington, Wiltshire; No. 12 M.U., Kirkbride, Cumberland; No. 22 M.U., Silloth, Cumberland; and No. 20 M.U., Aston Down, Gloucester. These units have been chosen because the runways are shorter than are required for modern aircraft, and are either inextensible or could only be extended at prohibitive cost. These closures will affect a total of about 2,400 staff and employees, of whom more than half are established civil servants.

MATERIEL

MILITARY TRANSPORT AIRCRAFT.—Messrs. Armstrong Whitworth have submitted a design for a military transport, the A.W. 660, a military version of the proposed civil A.W. 650 freighter coach aircraft. It will be smaller than the other designs which the War Office and the Ministry of Supply have so far been reported to be discussing. The maximum total loaded weight of the A.W. 660 will be 82,000 lb. Carrying 27,000 lb. it could fly 800 nautical miles. Its speed will be about 260 knots. Over a short range it will carry up to 75 men and on a long range 48 men with equipment. It is intended to be capable of operating from comparatively small airstrips. Armstrong Whitworth claims that ten of these planes could have transported the 3,500 men and 80 tons of equipment taken on the airlift to Cyprus in about 120 hours. This was the time taken by the 45 planes of older type used on the airlift.

Other designs under discussion are the Handley Page H.P. 111, a development of the Victor bomber, the Blackburn B.107, and the Britannic, a joint Short Bros. and Bristol Aeroplane Co. project.

MISCELLANEOUS

AWARD.—The Guild of Air Pilots and Air Navigators has awarded the Johnson Memorial Trophy to Squadron Leader J. H. Lewis, A.F.C., who commanded the R.A.F. detachment with the British Commonwealth Trans-Antarctic Expedition, for navigation during the unit's flying support of the Expedition and for making the first air crossing of the Antarctic in a single-engined aircraft.

NO. 11 GROUP MEMORIAL.—A stone plaque above the site of the underground operations room at the Headquarters of No. 11 Group, Uxbridge, was unveiled by Air Chief Marshal Lord Dowding, G.C.B., G.C.V.O., C.M.G., on 22nd April. No. 11 Group is shortly moving to R.A.F. Martlesham Heath, Suffolk, and the old operations room, which was the nerve centre of Fighter Command during the Battle of Britain when Lord Dowding was A.O.C.-in-C., is to become a Service telephone exchange.

After the unveiling of the memorial, made from a boulder of Cornish grey granite and bearing the badge of No. 11 Group, a Hurricane and a Spitfire from R.A.F. North Weald flew overhead and Lord Dowding, accompanied by the A.O.C.-in-C. Fighter Command, Air Chief Marshal Sir Thomas Pike, and the A.O.C. No. 11 Group, Air Vice-Marshal V. S. Bowling, visited the centre for the last time. For this occasion it was fully manned by personnel from a number of stations and as far as possible the events of Sunday, 15th September, 1940, were reconstructed.

PRESENTATION OF A SPITFIRE TO THE U.S.A.F. ACADEMY.—The Royal Air Force has presented to the United States Air Force Academy, Colorado Springs, one of the few remaining Spitfire aircraft. The Academy is the American counterpart of the R.A.F.

College, Cranwell, and the Spitfire will be displayed in its museum. The Spitfire was formally handed over by the Air Officer Commanding-in-Chief, Fighter Command, Air Chief Marshal Sir Thomas Pike, to the Deputy Commandant of the U.S.A.F. Academy, Colonel Benjamin B. Cassiday, at a parade held at R.A.F. station, Odiham, Hants, on 2nd July. A party of U.S.A.F. cadets from the Academy was present. The aircraft is a Mark XVI Spitfire and on its side is the following inscription: "This Spitfire is representative of the aircraft flown by the pilots of Fighter Command during the second World War."

NORTH AMERICAN AIR DEFENCE COMMAND

An exchange of Notes between the Canadian and United States Governments on 12th May established formally the North American Air Defence Command (NORAD), covering the continental United States, Alaska, and Canada, which was set up on an interim basis on 1st August, 1957. The agreed principles on which the integrated Command will operate are:—

- (1) The Commander-in-Chief NORAD (CINCNORAD) will be responsible to the Chiefs of Staff Committee of Canada and the Joint Chiefs of Staff of the United States.
- (2) NORAD will include such combat units and individuals as are specifically allocated to it by the two Governments.
- (3) CINCNORAD will have operational control of the assigned forces with the power to direct, co-ordinate, and control the operational activities of the forces assigned, attached, or otherwise made available.
- (4) N.A.T.O. will continue to be kept informed of the activities of NORAD.
- (5) NORAD will be maintained in operation for ten years unless a shorter term is agreed upon.

The Canadian Note pointed out that the co-ordination of separate air defence systems, requiring consultation before implementation, had become inadequate in face of possible sudden attack by nuclear weapons and the greatly improved means of delivering them. It was essential, therefore, to have in existence in peace-time an organization, including the weapons, facilities, and command structure, which could operate at the outset of hostilities in accordance with a single air defence plan approved in advance by national authorities. The U.S. State Department, amplifying the exchange of Notes, pointed out that the U.S. Strategic Air Command, with its capability for massive retaliation, remains strictly under United States command and is not the responsibility of NORAD.

NORAD will continue to operate from Colorado Springs, U.S.A. General Earl E. Partridge, U.S.A.F., and Air Marshal C. Roy Slemon, R.C.A.F., who have been serving as Commander-in-Chief and Deputy Commander respectively since August, 1957, will continue in their present capacities.

CANADA

Supreme Headquarters Allied Powers Europe has asked that the position of Deputy Chief of Staff (Operations) be filled by a Canadian Air Force officer. Canada has been pleased to agree to this request and the position has been filled by Air Vice-Marshal C. R. Dunlap, Vice-Chief of the Air Staff.

AUSTRALIA

HONOUR.—Air Marshal Frederick Rudolph William Scherger, R.A.A.F., Chief of the Air Staff, was awarded the K.B.E. in the Queen's Birthday Honours List.

FASTER-THAN-SOUND BOMBERS.—Attention is being given by the Royal Australian Air Force to the replacement of its front-line 500 m.p.h. Canberra jet bombers with the most modern type of nuclear planes of much greater speed. At Amberley Air Base

recently Air Vice-Marshal Candy said that Australia soon might have nuclear 'hit-run' bombers capable of flying at faster-than-sound speeds and able to zoom away from enemy missiles after dropping their bombs. The R.A.A.F. was looking closely at two or three American supersonic planes. A decision was some way off yet. Guided weapon units for the defence of the Newcastle-Sydney-Port Kembla strategic area would be started late next year or early in 1960.

WOOMERA.—The Commonwealth Government will spend £A1,000,000 during the next three years on extending the Woomera rocket range from South Australia into Western Australia. It will then become the longest overland range in the free world. When the plan is completed the proposed dropping area will be between Porthedland and Broome, on the north-west coast of Western Australia.

RHODESIA AND NYASALAND

R.R.A.F. COMMAND UPGRADED.—The post of commander of the Royal Rhodesian Air Force has been upgraded from Air Commodore to Air Vice-Marshal. The first holder will be the present commander, Air Commodore E. W. S. Jacklin. The promotion of the commander of the R.R.A.F. comes largely as a result of the growth of the Air Force and consequently its potential contribution to Commonwealth defence. It also makes the Air Officer Commanding equivalent in rank to the Chief of the General Staff.

FOREIGN

FRANCE

RESIGNATION OF THE C.A.S.—Général d'Armée Aérienne Bailly has resigned his appointment as Chief of the French Air Staff. He has been replaced by the Inspector-General of the F.A.F., Général d'Armée Aérienne Gelée, whose post he has assumed. It has also been reported that Ingénieur-Général Meyer, Director of the Direction Technique et Industrielle de l'Aéronautique, has tendered his resignation to the Secretary of State for Air as a protest against economies to be made in aircraft construction programmes in the 1958 military budget.

UNITED STATES

MORE MANNED AIRCRAFT.—Procurement plans for the U.S. Air Force in 1959 have indicated that many more manned aircraft are to be ordered in addition to a large number of missiles, and the development of piloted machines of extremely advanced design is to continue. Nearly 1,000 aircraft will be purchased for a total cost of about \$45,000,000,000, and the development is being accelerated of Mach-3 bombers and fighters for later procurement.

REVIEWS OF BOOKS

GENERAL

Lost Victories. By Field-Marshal Erich von Manstein. (Methuen.) 50s.

Field-Marshal von Manstein's memoirs, which have now appeared in English, are among the most interesting which a senior officer has contributed to the literature of the second World War. The reasonably detailed account of his tour of duty as Rundstedt's chief of staff, and later as corps and army commander, enables the reader to understand some of his tasks and to appreciate the brilliant and aggressive common sense with which he carried them out. The speed and co-ordination shown in the reconquest of the Kerch peninsula may be cited as typical of his virtuosity. Manstein solved the problem of frontally attacking a far superior force by first penetrating the weaker southern flank, then wheeling to envelop the strong northern sector, while a motorized brigade raced east into the communications zone, both to protect the enveloper's open flank and to forestall the establishment of a new front.

Though Manstein emphasizes that he has tried to avoid dealing with the non-military aspects of his campaigns, it is only natural that—perhaps despite himself—ethical and political problems repeatedly break through the soldierly narrative. A flair for moral philosophy cannot be expected in every general, but he must not be astonished that some awareness of this discipline should be demanded of him—particularly when he leads thousands of young men to fight for a regime whose innate evilness could have remained hidden only to the wilfully blind. Manstein's sense of responsibility expressed itself in an unusually pronounced feeling of comradeship with his troops and the determination to lead them as competently and successfully as Hitler would allow. In some cases he even advocated disobedience—for instance when a breakout from Stalingrad might have saved the 6th Army; but plotting against the State did not lie within his vision. In defending Brauchitsch, and by implicating himself against Ulrich von Hassell's charge of wavering over the use of violence against Hitler, he rightly points to the essential difference between plotting as a private person and as the head of an army. But, as Hassell said often enough, only army leaders disposed of the power necessary to overthrow the regime.

Throughout Manstein's period of command his plans were interfered with by Hitler on the most frivolous political and 'psychological' grounds, and one cannot be surprised that he has little good to say of political influence in war. It nevertheless remains striking that his concept of relations between the political and military leadership—most clearly expressed on page 276—seems no more than a modern restatement of Moltke's principle that military considerations are mainly decisive during the course of the war, while utilization of military success or failure falls into the realm of politics—a system of alternatives that had already demonstrated its helplessness during the second phase of the Franco-Prussian War.

The difficult task of shortening the original version of the memoirs by over 100 pages has been well managed on the whole, though certain deletions, such as a sentence from a conversation between the author and Hitler (page 512), should have been indicated as such. There are signs of hasty proof-reading, e.g., in the bottom photograph facing page 415 three members of von Manstein's staff are incorrectly identified; on page 439, the number of prisoners taken in various battles of encirclement during 1941 should read several *hundred*-thousand; etc. The competent translation conveys something of Manstein's characteristic ironic tone.

The Necessary Hell. By Michael Edwardes. (Cassell.) 25s.

Journal of the Siege of Lucknow. By Maria Germon. Edited by Michael Edwardes. (Constable.) 15s.

Rider on a Grey Horse. By Barry Joynson Cork. (Cassell.) 21s.

Mr. Edwardes plans a series of books on British rule in India, hoping that the time has now come when we can get away from heroics and nostalgia and by probing beneath

conventional history discover a truer picture of the period. He makes clear the object of this first volume in his introduction and epilogue, but it is less certain whether in the intervening series of extracts from books, letters, and reminiscences he achieves what he sets out to do. The period is that of the Lawrences and we hear much of them, but possibly the most relevant extracts are those from contemporary fiction, and these make excellent reading. We are, however, left in some doubt on the significance of the 'necessary Hell' and we could wish the author had marshalled his illustrative material as clearly as his argument. The book is in fact beautifully readable in bits, but not as a whole.

Mr. Edwardes's enthusiasm for 19th century India has already given us W. H. Russell's *Indian Mutiny Diary*. He now revives, and for this we should be eternally grateful, Mrs. Germon's simple and revealing diary written during the siege of Lucknow. A sweet person this, who takes her horrible experiences as part of the day's work, who is incapable of cattiness in an atmosphere where it must have abounded, and who describes her rescue with as little emotion as her daily threat of sudden death. One hopes that she and her 'dear Charlie' enjoyed much happiness later on.

William Raikes Hodson, alluded to by Mr. Edwardes as "one of the more dubious heroes of the Indian Mutiny," was a born fighter, a brilliant intelligence officer, an awkward subordinate, and frequently an unlikeable man. He had the fortune to live at a time when young officers of initiative had tremendous chances. Hodson took them, and his short career was one of ups and downs, the ups being truly won and the downs due mostly to his own faults, which were intolerance, an inability to choose the time to be silent, and a genius for making enemies. He welcomed responsibilities and got them, but it is typical of him that he was killed in a brawl in which he should have had no part and that he suffered a smear campaign after his death. His memory is rightly preserved in the famous cavalry regiment which bears his name. Barry Joynson Cork has not produced anything new about him but his book is a well told story and a welcome reminder of a remarkable personality.

The Schlieffen Plan. By Gerhard Ritter. (Oswald Wolff.) 30s.

Periodic denigration of the German General Staff is a healthy and regular pastime in British military circles, but we usually temper our distaste with a tinge of envy—the admiring contempt of the amateur for the professional. Behind the glittering facade of Potsdam, the sabre cuts and the monocles, there lay enshrined the mystique of the *Hauptgeneralstab*, the essence of Prussian efficiency and the cold glamour of the military cult. And no one personified this cult more dangerously than Graf Alfred von Schlieffen, Chief of the German General Staff from 1891 to 1905, and author of the famous operational plan for the invasion of France.

Much has been written about this plan. It has been represented as the acme of strategic finesse; it has even been accorded tactical significance by some of its more devoted admirers; more, it has been waved provocatively about the place as the solution to our troubles on the nuclear battlefield of today. Unfortunately, as much for its adherents as for its detractors, the complete text of the plan has hitherto remained buried in various archives, with the result that an air of mystery and almost Oppenheimer-like romance has surrounded the whole business. Extracts, comments, and second-hand snippets of the text were available and, like most military clichés, readily adaptable to any line of argument. So the 'enigma' and the 'riddle' persisted—until Professor Ritter, with Teutonic thoroughness, exploded the myth.

In his book he presents, with the well documented precision of the historian, the text of the plan itself, the corrections and comments of the younger Moltke (which, incidentally, highlight the very differing personalities of Schlieffen and his successor), and his own analysis of the historical and political impact of the plan as seen in the context of events in central Europe at the turn of the century. The result is a dispassionate, almost clinical, assessment of failure; a failure which cannot be attributed, as most of

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Schlieffen's apologists imply, to the modifications made by Moltke to the original draft, but which was due entirely to certain basic military weaknesses in the plan itself and to a complete disregard of its political repercussions. As Captain Liddell Hart in an excellent foreword to the book remarks, "As a strategic concept it proved a snare and a delusion for the executants, with fatal consequences that were on balance inherently probable from the outset."

This is an interesting book. The translators, judging by the stiffness of the prose, have struck fairly closely to the original; the maps are awful and the arrangement of the contents might have been improved if, for example, the plan itself (surely the key to the whole dénouement?) had come first instead of being poked away in an appendix. But even in this somewhat stylised and formal little work Dr. Ritter permits himself the odd touch of humanity. Thus Schlieffen, the man who, when his A.D.C. drew his attention to the beauty of the morning sun on the Pregel Valley, remarked, "An insignificant obstacle;" the man who kept his daughters up to 2 a.m. reading military history to them; and the man who sent his friends T.E.W.Ts as Christmas presents!

No wonder we won the war.

Victory Without War, 1958-1961. By George Fielding Eliot. (United States Naval Institute). \$2.

Soviet progress in the development of long-range ballistic weapons is causing uneasiness in the United States about the possibility of a surprise attack. Many Americans believe, as Mr. Eliot says in this interesting book, that "what the Soviets mean to do is to wait until they can be sure that they can destroy all our retaliatory power at one blow."

Mr. Eliot contends that the Soviet rulers would attempt this only if they felt certain of destroying all the bases from which a nuclear counter-attack could be staged, as they dare not accept the risk of even a few H-bombs on their vital centres. He agrees that, at present, there would be sufficient warning of an attack by manned bombers to allow a large proportion of the Strategic Air Command to take-off before the blow could fall. But he believes that, by 1961, the Russians will have sufficient long-range missiles to destroy, practically simultaneously, all the Western air and missile bases.

The only defence, he contends, is mobility and concealment, achieved by diverting as much as possible of the counter-attack to sea-borne bases. The United States, by 1961, could have in being a substantial force of carriers equipped with nuclear bombers and later with the Polaris medium-range ballistic missile, and some 20 nuclear-powered submarines capable of launching the medium-range missile.

Mr. Eliot points out that Soviet propaganda is doing its best to frighten America's allies into refusing facilities for missile bases or demanding a veto over their use. Sea-borne nuclear power is physically detached from populated areas and attempts to destroy it would not involve allied countries in disastrous consequences.

There is, indeed, much to be said for supplementing the nuclear counter-offensive by a sea-based element, but Mr. Eliot adds nothing to the strength of his case by claiming that carriers at sea are virtually undetectable and unsinkable.

Japan and her Destiny. By Mamoru Shigemitsu. (Hutchinson) 30s.

Japan Between East and West. By Hugh Borton, Jerome B. Cohen, William J. Jorden, Donald Keene, Paul F. Langer, C. Martin Wilbur. (Oxford University Press.) \$4.75.

The titles of these two books should be transposed, for the late Mamoru Shigemitsu's valuable contribution to the history of the events which brought Japan to war and ruin faithfully reflects the tensions between East and West which produced the catastrophe, while the American Council on Foreign Relations' study of Japan since the Peace Treaty

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illuminates the problems which face present-day Japan and upon the solution of which her destiny depends.

Shigemitsu's book is the moving personal testament of a sincere seeker after peace who was a true friend of Britain, and no other Japanese was better qualified to unravel the tangled web of intrigue, perverted nationalism, and sheer savagery which enmeshed his unhappy country in its toils. Throughout he has maintained an integrity and an objectivity rare in his race. The general features of the story are well known, but he has clarified several points which have hitherto been obscure and the explanation of which demonstrates the essential instability of the Japanese character. The arrogance of the Japanese General Staff and the extent to which power passed from the Government to the soldiers is strikingly illustrated by the astonishing incident in 1940 when the Director of Military Intelligence in Tokyo issued to the British Military Attaché what was, in effect, an ultimatum.

After becoming Foreign Minister in March, 1943, Shigemitsu deemed the quest for peace to be his most important duty and he unflinchingly pursued that quest in the face of violent and often dangerous opposition, sustained by the knowledge that he was supported by the Emperor himself. The fact that he chose to be his country's signatory to the Instrument of Surrender was the measure of Shigemitsu's stature. He compiled this record during the two years that he spent in prison as a war criminal, and it is recommended to all who would gain a true picture of the chain reaction which ended with the atomic destruction of Hiroshima and Nagasaki. The difficult tasks of translating and editing this book have been ably carried out by two men who, by training and temperament, were particularly fitted for the work.

Speaking of prostrate Japan Shigemitsu says, "Her journey through Hell will have had a meaning if she emerges worthy of herself"; and *Japan Between East and West* is an attempt to analyse present trends in politics, economics, foreign relations, and literary and intellectual currents, and to assess the influence of Communist doctrines on post-war Japan. The recent elections show that the optimism of the writer on politics was well founded, and in the economic field the evidence seems to indicate that Japan has staged a remarkable recovery from the depths of defeat and collapse.

Foreign relations are obviously closely bound up with the strength of Communist influence, and here, in the view of this study, Communist China looms large as the only rival of the United States for the soul of Japan. Many who know the Japanese will hesitate to agree and, indeed, the chapter on literary and intellectual trends comes to the conclusion that while many Japanese economists and historians are tainted by Marxism, this is not true of general literature and that therein lies a source of spiritual strength and independence. Let us hope that this a reliable indication of a gathering strength which will restore a purged Japan to her place in the comity of nations.

The general impression gained from this work is of the resilience of the Japanese people and one lays it down with the conviction that Japan has regained her desire for independence and freedom of action in world affairs. The dangers of a resurgent Japan are clear, but her potentiality as the main bulwark against Communism in East Asia is impelling and must remain in the forefront of all thought and diplomacy by the United States and her friends. There is an interesting chapter on some findings of Japanese opinion polls. This book is an efficient and careful study of a vital problem and should be read by all students of the Far East.

Operation Sea Lion. By Ronald Wheatley. (Oxford University Press.) 30s.

The Silent Victory. By Duncan Grinnell-Milne. (The Bodley Head.) 21s.

The main sources of information used by both authors are the same; the German naval archives and the appropriate volumes of the History of the second World War. Both authors have made a close study of the strategical panorama when Operation Sealion—the invasion of Britain by sea—was conceived and then prepared for. Hitler

was moved to this venture because of the ease with which Germany had invaded Norway. He was unable to grasp the fact that the English Channel presented a situation entirely different from the one prevailing in that campaign. The chiefs of the German Army and Luftwaffe knew, if possible, even less about the sea than did Hitler and gave him enthusiastic support. The German Navy, on the other hand, had grave doubts from the start. The Norwegian campaign had certainly not been a walk-over for the German Navy. Mr. Grinnell-Milne gives some tables showing the losses and damage which it had sustained and the consequent meagre force available for Sealion.

Both books give in much detail the composition of the Sealion force; a veritable armada including thousands of barges most of which had to be towed—at a speed of three knots! The important point is made that the transports would have had to lie off the British coast for 36 hours while being unloaded, and the hazards of navigation and weather, so lightly brushed aside by the generals, are duly set down. Truly a mad enterprise!

It is made quite clear that the Führer had, from the start, decided that the invasion must follow on an air offensive which was to defeat the Royal Air Force and to demoralize the British people. As, however, our all too few fighter airmen had no intention of being defeated and as the morale of the people went up instead of down; as our bombers were causing appreciable damage to the invasion shipping packed in French harbours; and, finally, as Hitler began to understand that the Royal Navy was of itself a formidable barrier, he called it a day.

Now as to the conclusions reached by the two authors. Mr. Grinnell-Milne ends his book with the remark that the Royal Navy kept Sealion in its ports. Mr. Wheatley says: "In the early years of the second World War, Britain's superiority at sea alone was no longer decisive and on this occasion the German attempt failed apparently owing to her air power. But her sea power remained an influence of major importance." That seems fair enough and history repeats itself. For Britain's sea power has, right through our history, rested not only on the Navy and the Merchant Navy but also on the Army and now, very much so, also on the Royal Air Force.

While it is evident that our air forces were the main cause for the collapse of Sealion I would suggest that, had the expedition put to sea and that even had our aircraft been pinned down by superior forces, Sealion would have been well and truly massacred by the Navy.

American Contributions to the Strategy of World War II. By Samuel Eliot Morison. (Oxford University Press.) 12s. 6d.

This small volume is based on two lectures delivered by the author, a distinguished American historian, at Oxford University in May, 1957. He deals with American strategy under three headings.

First, her contribution to the over-all strategic principle which governed the Allied conduct of the war. In brief this amounted to 'beat Hitler first.' In March, 1941, a secret Anglo-American staff conference held in Washington reached agreement that "if and when America entered the war, her principal military effort would be exerted in the European theatre; that she would try to avoid war with Japan; but that, if Japan were to attack the United States, operations in the Pacific would be conducted in such manner as to facilitate the effort against Germany." In spite of wide and varied differences of opinions as to how this over-all strategy was to be implemented neither side wavered in their allegiance to it throughout the war.

Second, America's contribution to the strategy in the European theatre, and especially to invasion of the Continent. As is now well known it was in this sphere that the respective views of the American and British Chiefs of Staff ran counter on many occasions. The former, with characteristic simplicity of purpose, advocated "immediate planning and preparations for a massive assault aimed at the heart of Germany." The latter advocated "closing a tight ring about Germany by thrusting armoured forces in amphibious landings

all round the Axis periphery" until the time was ripe for all-out invasion. The author traces the historical background which led to this fundamental difference in strategic thinking between the two nations, an important factor on the British side being a grim determination to avoid any repetition of the gigantic casualties incurred by the Commonwealth forces in France in 1914-18. His analysis of the personalities involved in the Combined Chiefs of Staff and at the various high level meetings held during the war are on the whole illuminating and free from bias, but when he turns to the part played by Lord Alanbrooke, as recorded in Sir Arthur Bryant's *The Turn of the Tide*, he becomes frankly critical. He admits that this book has caused him provocation by—in his opinion—depicting General Marshall as an amateur in strategy, by overstressing the part played by Lord Alanbrooke, and by minimising the part played by the other members of the British Chiefs of Staff. In a masterly summary of the many conflicting views which were ironed out in the Joint Chiefs of Staff he pays a most handsome tribute to the part played by the late Field-Marshal Sir John Dill. He concludes that the Anglo-American compromise of concentrating on the Mediterranean in 1942-43 and pulling off the big cross-Channel operation in 1944 was correct. His reasons for this conclusion are amongst the most important passages in the book.

Third, the strategy of the war against Japan in the Pacific, which was almost completely American. Here Morison maintains that, after the initial "colossal blunder in high strategy" of underrating the Japanese strength and intentions which preceded Pearl Harbour, the United States planners never put a foot wrong in the Pacific. Their task was made easier by the failure of Admiral Nagumo to sink a single carrier or to destroy the naval installations at Pearl Harbour, and by General Tojo's strategy of 1942 which aimed at further conquests instead of consolidation. He quotes figures to show that the relative strength in manpower, aircraft, and landing craft (here he has another tilt at the Alanbrooke diaries) employed by U.S.A. in the Pacific and European theatres during the critical years 1943-44 conformed strictly with the policy of 'beat Hitler first.'

The smallness in size of the book is no measure of its contribution towards an understanding of the men and events which combined to make up "the most successful Grand Alliance in history."

Cabinet Government and War. By John Ehrman. (Cambridge University Press.) 16s.

The reader of this invaluable study of Cabinet organization for war between 1890 and 1940 will see before his eyes something of the stratification of history. The passion, which accompanies all warlike action, here no longer clouds the vision and hinders judgment. The ghastly muddles of the Dardanelles and Mesopotamia, the failings of Kitchener, and the quarrels of Lloyd George glide diminished into the proper perspective of a distant scene. How disturbing they once were!

Mr. Ehrman is at pains to show that the great changes in the Cabinet's procedure have been a continuous process which did not alter the traditional methods of the British system of government. The new measures did no more than gradually to remove the power from the hands of the Service Ministers and entrust it to a professional executive committee acting under the aegis of successive Heads of the State. The Committee of Imperial Defence was, in one form or another, the *fons et origo* of the silent and effective revolution. This famous body was "peculiarly Balfour's monument"—a memorial far more pleasing than the ill-fated declaration which bears his name. The purpose of the Committee of Imperial Defence was sustained throughout its various transformations by a most competent military staff, amongst whom were Hankey and Ismay. It is interesting to note that a Ministry of Defence was much in demand in the twenties and early thirties and that the present Ministry is chiefly important for the network of Defence Committees housed within its walls.

Mr. Ehrman's study stops short in a rather vexing way at 1940. Like a true historian he would like more information before tackling the closer parts of his picture. They will not be easy.

The Boer War. By Edgar Holt. (Putnam.) 25s.

Fifty-six years ago the Boer War ended and a British victory was celebrated; military prowess had, after some delay, been uncovered and the political objects of the war seemed secure. Today the military victory is irrelevant and political supremacy is completely in the hands of our opponents of 1899-1902. To many this may seem the reward of wicked Imperialism—freedom will have its way—but was the Boer War 'Imperialist' and, if so, who were the Imperialists?

Mr. Holt has written a fine, sober account of the conflict from the curtain-raiser campaign of 1881 to 1902. The balance is divided fairly between political and military narrative. The former tells dispassionately—albeit with some humour—of the rights and wrongs of the Uitlanders and of the complications caused by the existence of diamonds and gold. The war itself is adequately described. Incompetence is neither glossed over nor sneered at, efficient commanders receive full credit, and the activities of some who became famous in a war which came 12 years later are told in some detail. It is all easy to read and is thought provoking throughout. 'No taxation without representation' has different aspects in different countries. So has the definition of 'aggressor.' On every count the Boers were aggressors in 1899. But would they have been if the appalling blunder of the Jameson Raid had been avoided? We are still paying for that raid.

Kipling wrote after the war:

"... We have had no end of a lesson:
It will do us no end of good. . . ."

Politically we may have learned something. Militarily we may have learned a little and that wrong, but one trembles to think what our commanders and staffs would have been like in 1914 without the shake-up of 1899-1902. This is indeed a book to read, well illustrated and adequately mapped.

Arnhem. By Major-General R. E. Urquhart. (Cassell.) 21s.

Daedalus Returned. By Baron von der Heydte. (Hutchinson.) 16s.

On 17th September, 1944, was launched the greatest airborne operation ever attempted. It was largely successful although the final objective, the bridge at Arnhem, though captured and held for some days, was eventually lost. The reasons for this partial failure are a matter of some controversy.

Major-General Urquhart, Commander of the 1st Airborne Division, has now published his account of the struggle for Arnhem. It is a remarkable story and exceptionally well told. As Divisional Commander, and yet intimately involved in the actual fighting, the author was in an unique position to get a balanced view of the battle. Moreover General Urquhart tells his story not only colourfully but with unusual frankness and honesty. He conceals neither the great heroism and skill shown by his airborne soldiers nor the mistakes and weaknesses inevitable in any battle of this nature. The result is a most readable and absorbing book which will interest a wide circle of readers.

Although some may deprecate his candid, almost naive, descriptions both of his own feelings and of the personal relationships between some of his officers, most students of war will regard such comments as greatly enhancing the value of the story. General Urquhart confines his account largely to a description of the intense fighting at Arnhem and does not say much about the planning and organization before the operation started; this may disappoint those who feel that it was in the planning stage that the battle was lost. But the description of the fighting itself, as seen from both the British and German

viewpoints, is exceptionally well done and evokes very clearly the authentic flavour of a desperate battle.

Baron von der Heydte commanded a German Parachute battalion in the airborne invasion of Crete in 1941. In *Daedalus Returned* he has written an account of this remarkable feat of arms as he saw it. His story, though written in a romantic manner which may irritate some, is not without interest. But, in marked contrast to General Urquhart, Baron von der Heydte saw little of the fighting outside his own battalion perimeter and had small knowledge of what was occurring elsewhere. He believed throughout that the German position was desperate and was most surprised and relieved when the British withdrawal began. The book is worth noting by students of airborne warfare but is scarcely sufficiently authoritative to be of general interest.

NAVAL

The Secret Invaders. By Bill Strutton and Michael Pearson. (Hodder and Stoughton). 16s.

The Secret Invaders tells the story of the Combined Operations Pilotage Parties, an organization of intrepid swimmers set up to make accurate surveys of those beaches still in enemy hands on which subsequent assault landings were to be made. The work they did on these dangerous reconnaissances made possible the invasions which finally led to victory.

The book is largely the story of Lieut.-Commander Nigel Willmott, in whose brain in 1940 was born the idea of beach reconnaissance. In 1941 he received permission to carry out a first attempt on the beaches of Rhodes. Its success appeared but dimly to penetrate the official brain and it was not until more than a year later, shortly before the launching of Operation "Torch," that Willmott was called to Combined Operations Headquarters with orders to enlist and train three teams to survey the African beaches. Within two months his teams were in Gibraltar, only to receive an absolute veto to land on the beaches. What little could be done through a more distant reconnaissance and by beach marking was done, but the resultant chaos of the initial landings told its own story.

From then on it was a constant battle for suitable equipment for these Pilotage Parties. In the end the battle was won in time for their triumph off Normandy. By 6th June, 1944, every beach in the assault area had been thoroughly surveyed, navigational marks selected and fixed, underwater beach gradients worked out, and samples of sand from each beach brought home. More, off each beach in the British and Canadian sector a C.O.P.P. team was waiting to guide the assault craft in. The same service had been offered to the Americans in their sector but had been declined. The shambles off Omaha beach was the answer.

This is a thoroughly exciting book, full of interest and adventure. It is written in lively fashion and tells its story vividly and convincingly. As Earl Mountbatten of Burma says in his foreword, we can be "delighted that their unobtrusive valour has at last been set down in a book." The debt which the free world owes them is immense.

Bless Our Ship. By Captain Eric Wheler Bush. (George Allen and Unwin.) 21s.

This is a delightful book and one of the best of its kind I can remember. The style is perfectly suited to the subject. Captain Bush writes conversationally; he seldom raises his voice and never strives after effect. And yet the effect is there and the readers' feelings and interest are immediately and fully engaged. There is, of course, much about war, but amusing anecdotes and witty comments are never far away.

Captain Bush tells his naval story from the very beginning—the medical examination prior to entry into Osborne in 1913. When war started his term, though the average age of the cadets was 15, was sent afloat and, in the North Sea, at once met the full blast

of war. Then came the Dardanelles, of which we get interesting sidelights; followed by the Battle of Jutland in which, stationed in the spotting top of a battleship, he was in a position to get glimpses of striking incidents at various stages of the fighting. After the war sub-lieutenants were sent to Cambridge to catch up on their education. If they do not appear to have worked very hard they certainly enjoyed themselves. "One College," he writes, "produced a boat's crew of sailors who reached the head of the river trained on pink gin."

The Baltic, East Indies, China and the Yangtse—all these seas and lands produce a goodly crop of yarns. There follows the second World War. Dover and Dunkirk; and personal impressions of the great evacuation never stale. Finally came command of H.M.S. *Euryalus* in the Mediterranean; and the Battle of Sirte, Admiral Vian's famous convoy action, especially to be mentioned.

The book ends in a pretty way. The last sentence is the same as the opening one: "If you'll just take off your shirt, Sir, the P.M.O. is ready for you now." The first alludes, of course, to himself at his medical examination; the last to his son whom he had taken to the Admiralty for the same purpose.

The Story of the Ship. By Charles E. Gibson. (Abelard-Schuman.) 21s.

To attempt the history of the ship, from dug-out to *Queen Elizabeth*, in some 260 pages is a daunting project even when the book is written for laymen. Yet the author has not only written a lucid outline narrative but has coloured it, in the progress of his story, with many glimpses of the economic and political background in so far as it affects ship design and development. So that towards the end the tale is as much of shipping as of ships and it does not lose for that. There is room even for warships, guns, and armour. There are appendices, index, bibliography, glossary, and many good illustrations. An interesting achievement.

H.M.C.S. Naden. By Frederick V. Longstaff. (Published by the author.)

H.M.C.S. *Naden* is the name of the Royal Canadian naval base at Esquimalt, on the Pacific coast. Into this small booklet Major Longstaff, whose work in naval research is as well known in this country as in Canada, has packed all the facts he can discover in the history of the Esquimalt base. It is good that these facts are recorded before they become lost forever in the mists of time, and the Canadian Navy in particular must be grateful and gratified by all this painstaking work on their behalf. No fact is too small or too remote for Major Longstaff's searching pen, and this little book will remain for long as a tribute to his thoroughness and indefatigable zeal. The eight photographs, all but two of them over 40 years old, are a delight.

ARMY

Armies and Men. By Walter Millis. (Cape.) 25s.

This is a fascinating book which will remind most English readers of their dreadful ignorance of the military history of the U.S.A. The author's object is to retrace the past and thereby to shed illumination on the seemingly insoluble problems of today.

His factual review succeeds as far as it can but the illumination fails, for facts by themselves are only the raw material of enlightenment. They have to be flogged out on the anvil of first principles before they will yield up the secrets which lie behind them. Captain Mahan did just that in his *Influence of Sea Power on History*, and thus most tiresomely revealed to other nations the prime cause of Britain's world supremacy in the 19th century.

From his admirably set-out history, Mr. Millis might well have advanced the theory that military leaders in the U.S.A. have often enjoyed too much power and that they sometimes used purely military requirements for fashioning political policy. This is an

interesting possibility and it no doubt suits an intensely individual race like the Americans. But it turns their military leaders into political figures, a procedure which most other countries condemn because it makes the correct choice of national policy even more difficult. The Americans, indeed, do not shine at policy making—possibly because the military power is too close to the President.

The chief conclusion of the book is that modern war is now far too desperate a remedy for settling international quarrels. That is certainly true of total nuclear war. But surely there are many other kinds of war for the continuation of policy by other means? Clausewitz himself has listed them. Soldiers will rejoice at Mr. Millis's dictum that in reality all wars are land wars, for that is what, in the end, we have always felt.

G. Patrol. By Michael Crichton-Stuart. (William Kimber.) 21s.

The Phantom Major. By Virginia Cowles. (Collins.) 16s.

The fluidity of operations in the last war lent itself to the use of small and mobile raiding parties capable of penetrating many miles into enemy territory. The Resistance movement in France and other occupied countries, Wingate's expeditions into Burma, and the Long Range Desert Group are the best known examples. Much has been written about them in recent years. Less known is the origin of the L.R.D.G. and hitherto the story of the Special Air Service has been veiled in mystery.

For many years before the war Major Ralph Bagnold (later Brigadier), Royal Signals, had devoted his periods of leave to exploring the Libyan Desert. In time he gathered together a small band of enthusiasts. Between them they covered many thousands of miles and mastered the technique of desert navigation by sun compass and tested the capabilities of various types of vehicles to overcome desert obstacles. The idea of applying Bagnold's experience to operational needs remained unheeded until General Wavell heard of it in the summer of 1940. He immediately recognized the value of sending small raiding parties to harass the enemy's lines of communications and, still more important, to seek information. Bagnold formed the first three patrols from New Zealanders. By the end of the year L.R.D.G. had proved its worth and three more patrols were formed from Rhodesians, Yeomanry, and the Brigade of Guards. Major Crichton-Stuart led this last patrol from its formation up to July, 1941, so he writes from first-hand knowledge of that period; thereafter he relies on the diaries of others. The result is a scholarly study in military history of an unusual nature; at the same time it is a study of human endeavour and courage which will appeal to a wide circle of readers.

It has fallen to Virginia Cowles, the distinguished woman war correspondent, to unearth and piece together the story of the Special Air Service in North Africa. It forms a companion piece to *G. Patrol* since, after his initial failure by parachute, Major Stirling abandoned the air and relied on wheels and the L.R.D.G. to transport his small raiding parties to and from their targets. If it is largely the story of one man, this is because the whole of the S.A.S. revolved round the personality of its leader, who as a second-lieutenant sold his ideas personally to General Auckinleck, and whom Sir Winston Churchill once described as "the mildest mannered man that ever scuttled ship or cut a throat." Not that the authoress has failed to do justice to that small band of personalities, officers and other ranks, whom Stirling collected round him and who carried on the good work after his capture, and who, in Rommel's own words, "caused us more damage than any other British unit of equal strength." Today the S.A.S. Regiment forms an established part of the British Army (and other armies), a lasting tribute to 'the Phantom Major' and his gallant band.

In the concluding chapter the authoress raises the interesting question whether the outcome of Suez might not have been different had the S.A.S. been employed to destroy the airfields and guns in Egypt instead of bombers. The Regiment's motto, "Who dares, wins," is not without significance in the history of war.

Storm From The Sea. By Lieut.-Colonel Peter Young, D.S.O., M.C. (William Kimber). 21s.

This is partly the story of No. 3 Commando which the author, a Regular officer, joined in the summer of 1940 and commanded from August, 1943. But, as he left the unit in October, 1944, to become second-in-command of the 3rd Special Service Brigade in Burma, the book ends with an account of that formation's fighting in the Arakan during the final advance.

The 3rd Commando took part in the expeditions to Lofoten, Vaagso, and Dieppe. Then followed the landing in Sicily, another at Agnone, an extraordinary adventure on the toe of Italy, and later the landing at Termoli and subsequent fighting under the 78th Division. Soon after this the unit returned home to prepare for the landing in Normandy. Going ashore on D-Day they were 'in the line' from that day until reaching the Seine at the end of August.

They met with failures as well as successes. Among the latter Agnone was, perhaps, their greatest feat. This is commemorated by a plaque set into the bridge over the River Leonardo, which they prevented the enemy from destroying and, by their action, drew large numbers of enemy troops from the forces opposing the British drive on Catania. The *esprit-de-corps* of the unit appears to have been very good and great care seems to have been taken in the selection of non-commissioned officers and the training and re-training of all ranks. The story is well and simply told without heroics. It is garnished with good anecdotes, cynical and otherwise, but mostly apposite.

The Royal Leicestershire Regiment : A History of the years 1928 to 1956. Edited by Brigadier W. E. Underhill, O.B.E. (Published by the Regiment.)

This volume continues the stirring story of the old 17th Foot, 'The Tigers,' who added greatly to their laurels during the period covered. Both Regular battalions were abroad on the outbreak of war, the 1st in India and the 2nd in Palestine. The 4th (T.A.) Battalion had been converted to anti-aircraft in 1936, but the 5th (T.A.) Battalion had been doubled in 1939. Three new battalions were formed, the 6th (Home Service) in 1939 and the 7th and 8th in 1940.

The outbreak of war found the 1st Battalion on the North-West Frontier where they remained until December. Then, after a few weeks at Agra, they moved to Malaya. Serving with the 11th Indian Division, the Battalion fought continuously through the long retreat to Singapore, during which they were amalgamated with the 2nd East Surrey Regiment into the 'British Battalion' as both units were very much reduced by casualties. It is said that neither as the Leicesters nor as the British Battalion did they give up a portion of their line before being ordered to do so. The story of their dreadful captivity following the fall of Singapore is told in some detail which shows the fine behaviour of all ranks in adversity. Reformed on the 8th Battalion in June, 1942, the 1st Battalion saw service in Normandy, Belgium, and Holland where they acquitted themselves very well. In 1951, the 1st Battalion, which by then had been amalgamated with the 2nd, was involved in heavy fighting in Korea.

The 2nd Battalion took part in the Libyan offensive of December, 1940, fought in Crete and Syria in 1941, and later that year formed part of the Tobruk garrison. On 4th May, 1942, they sailed for Ceylon and remained there until January, 1943, when they left for India. Both the 2nd and 7th Battalions played a worthy part in the Chindit operations of 1944, but suffered so heavily that they were amalgamated later in the year. The Battalion remained in India until 1947.

The 1/5th Battalion served in Norway in 1940 and was afterwards converted into a pre-O.C.T.U. training battalion. The 2/5th Battalion stoutly upheld Regimental traditions in France during 1940, Tunisia, Italy, and Greece, in spite of heavy casualties.

The book is well arranged; the narrative is clear and concise, and includes some personal experiences and interesting anecdotes. The spirit of all ranks of the Regiment is apparent and this, with the attention to training whenever possible, is the reason for the remarkable recoveries made by all battalions after heavy casualties. The volume is well produced, contains an imposing list of honours and awards, is provided with 21 sketch maps and good illustrations, but has no index. It is a good example of what a regimental history should be.

The First Punjabis. By Major M. I. Quereshi. (Gale & Polden.) 30s.

"This is the history of the 1st Punjab Regiment and covers nearly 200 years of its life. It is not a story that flows without a break, for there are a number of changes that might be thought to sever the present from the past. There are changes in name and changes in organization. There are changes in the classes of men recruited and in the nationality of the officers. There are, on occasion, changes even in the allegiance of the Regiment."

Major Quereshi's opening sentences indicate the magnitude and the difficulties of his task. He has had to trace the evolution of the oldest regiment of the Indian Army from the formation of the first two battalions, recruited in the service of the Honourable East India Company in 1759; its transference from the Company to the Crown after 1857; the reconstitution and reorganization of 1902-03 when men from Madras were mustered out and replaced by recruits from the Punjab; the linking of the first two battalions to form the 1st Punjab Regiment in 1922; and its final incorporation in 1947 in the Army of the sovereign and independent state of Pakistan.

To tell the domestic story alone, from so complex a mass of material, and to make it both easily intelligible and interesting, might have puzzled a professional historian. In addition, Major Quereshi has had to follow the course of the Regiment during the same long period over innumerable battlefields. Painting necessarily with bold strokes on a wide canvas, he has yet to include details of those small actions and individual feats of arms which, in sum, make up the history and the traditions of a regiment.

In the space available it is only possible to say that he has so admirably succeeded that this is quite one of the best and most readable of all regimental histories. Major Quereshi has thus earned the gratitude of all 1st Punjabis. But he has done more; he has written an objective and unbiased book of real historical importance.

To Field-Marshal Sir Claude Auchinleck, who joined the Regiment 54 years ago and is now its Colonel, credit is due for his continued interest in the undertaking. It is pleasant, too, to know that from Army Headquarters in India, as well as from British officers, Major Quereshi received all possible co-operation. The publishers, Messrs. Gale and Polden, have done their part by producing an unusually handsome and well-printed volume, with excellent maps and illustrations, at a very moderate price.

The Story of the Monmouthshire Volunteer Artillery. By Colonel W. L. C. Phillips and Captain John More. (Hughes and Son, Pontypool.) 25s.

This is a story of a volunteer unit, formed in 1860 as garrison artillery, which after several changes of title, exists today as the 283rd (Monmouthshire) Field Regiment, R.A. (T.A.). It is a unit in which family and local connection have always been strong, and one of the objects of the book is to provide the means by which "all those who serve or have served in the Regiment may read and remember with pride the part that they and their forebears have taken."

The clear and concise narrative relates the story of the early days with due attention to personalities. It describes the unit's service with the 53rd (Welsh) Division in the first World War, the highlights of which occurred during Lord Allenby's two offensives in Palestine. Then follows an account of the years between. In the second World War the unit, expanded to two regiments but still part of the 53rd Division, fought from the

beaches to Hamburg. Both regiments were heavily engaged in Normandy and during the long drawn-out battle of the Reichswald.

The authors have succeeded in producing a stirring story and have included a number of good anecdotes. These reveal, among other things, how individuals acted and felt under the strains and stresses of action under climatic conditions varying from the Sinai Desert during a Khamsin to the icy hills of the Ardennes or the slush of the Reichswald.

AIR

Danger in the Air. By Oliver Stewart. (Routledge and Kegan Paul.) 28s.

There is something dramatic about any major flying accident and in some there is an intriguing exercise in detecting the cause. Major Oliver Stewart's *Danger in the Air* will thus appeal to the general reader as well as the student of flight safety. In this book he describes, with clarity and not too much detail, some 20 or more serious accidents, both to Service and civil aircraft, covering such a wide field as the R.101 disaster, the Vulcan crash at London Airport, and the disappearance of Star Aerial in the West Indies in 1949.

The up-to-date practising airman may find some of the detailed opinions unacceptable, but these do not affect the major facts and deductions on the accidents described. However, for all readers the facts are presented clearly and in some instances provocatively, as is to be expected from the Editor of *Aeronautics*.

The book has a theme; the accounts related are designed to support a case which must receive sympathetic hearing—although the author's secondary campaign, to introduce the decimal system for all flying and aircraft measurements, is unlikely to be so well received—especially by pilots who in recent years have overcome the difficulties of changing from m.p.h. to knots and from gallons to pounds of fuel, and are now being asked to think in terms of k.p.h. and metres instead of knots and feet. In using metric figures the author has kindly inserted the normally accepted notation in parentheses where appropriate. His principal theme might be summed up as a case against the investigator's attitude of mind of when in doubt to blame the pilot.

Whether they agree with the author, or whether they find his notation unacceptable, the book is bound to interest all who travel by air as passengers or aircrew, and all those who have anything to do with the ground organization to design, service, and operate modern aircraft.

ADDITIONS TO THE LIBRARY

(*Books for Reference in the Library only)

ART OF WAR

THE SCHLIEFFEN PLAN. By Gerhard Ritter. (Oswald Wolff, 1958.) 30s. Presented by the publishers. (See review in this JOURNAL.)

WAR AND SOCIETY IN THE 17TH CENTURY. By Sir George Clark. (Cambridge University Press, 1958.) 18s. 6d.

NAVAL

*BRITISH BATTLESHIPS 1860-1950. By Doctor Oscar Parkes, O.B.E., A.I.N.A. (Seely Service, 1957.) 120s.

ZEEBRUGGE. By Barrie Pitt. (Cassell, 1958.) 18s.

BLESS OUR SHIP. By Captain Eric Bush, D.S.O., D.S.C., R.N. (Allen and Unwin, 1958.) 21s. Presented by the publishers. (See review in this JOURNAL.)

THE STORY OF THE SHIP. By Charles E. Gibson. (Abelard-Schuman, 1958.) 21s. Presented by the publishers. (See review in this JOURNAL.)

THE ROMANCE OF THE CLIPPER SHIPS. By Basil Lubbock. (Hennel Locke, 1958.) 21s.

NATURE IS YOUR GUIDE. By Harold Gatty. (Collins, 1958.) 16s.

SEA PRELUDE. By Geoffrey Rawson. (Blackwood, 1958.) 18s.

H.M.C.S. NADEN NAVAL BARRACKS. By Frederick V. Longstaff. (Privately published, 1957.) Presented by the author. (See review in this JOURNAL.)

AIR

THE FASTEST MAN ALIVE. By Lieut.-Colonel Frank K. Everest. (Cassell, 1958.) 21s.

MY ZEPPELINS. By Hugo Eckener. (Putnam, 1958.) 21s. Presented by the publishers.

HELICOPTERS AND AUTOGYROS OF THE WORLD. By Paul Lambermont with Anthony Pirie. (Cassell, 1958.) 30s.

DANGER IN THE AIR. By Oliver Stewart. (Routledge and Kegan Paul, 1958.) 28s. Presented by the publishers. (See review in this JOURNAL.)

SECOND WORLD WAR

WINSTON CHURCHILL AND THE SECOND FRONT. By Trumbull Higgins. (Oxford University Press of New York, 1958.) 42s.

LOST VICTORIES. By Field Marshal Erich Von Manstein. (Methuen, 1958.) 50s. Presented by the publishers. (See review in this JOURNAL.)

AMERICAN CONTRIBUTIONS TO THE STRATEGY OF WORLD WAR II. By Samuel Eliot Morison. (Oxford University Press, 1958.) 12s. 6d. Presented by the publishers. (See review in this JOURNAL.)

OFFICIAL HISTORY OF THE INDIAN ARMED FORCES IN THE SECOND WORLD WAR. Campaign in Western Asia. Edited by Bisheshwar Prasad. (Historical Section: India and Pakistan, 1958.) 50s. Presented by the publishers.

THE PHANTOM MAJOR. By Virginia Cowles. (Collins, 1958.) 16s. Presented by the publishers. (See review in this JOURNAL.)

G-PATROL. By Michael Crichton-Stuart. (Kimber, 1958.) 21s. Presented by the publishers. (See review in this JOURNAL.)

ARNHEM. By Major-General R. E. Urquhart, C.B., D.S.O. (Cassell, 1958.) 21s. Presented by the publishers. (See review in this JOURNAL.)

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THEY SPIED ON ENGLAND. By Charles Wighton and Gunter Peis. (Odhams, 1958.) 18s.

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- THE JERVIS BAY. By George Pollock. (Kimber, 1958.) 21s.
- SALT-WATER THIEF. The life of Odd Starheim. By E. O. Hauge. (Duckworth, 1958.) 15s.
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- THE BLOCKHOUSE. By Jean-Paul Clebert. (Secker & Warburg, 1958.) 15s.

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- BRITAIN AND THE UNITED NATIONS. By Geoffrey L. Goodwin. (R.I.I.A., 1958.) 38s.
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- THE ARMS RACE. By Philip Noel-Baker. (Atlantic Books, 1958.) 25s.
- WORLD AFFAIRS SINCE 1919. By Peter Wales. (Methuen, 1958.) 11s. 6d.

COMMONWEALTH

- THE ENTERPRISE OF ENGLAND. By Thomas Woodrooffe. (Faber, 1958.) 25s.
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- A REVIEW OF COMMONWEALTH RAW MATERIALS, Vol. I. By The Commonwealth Economic Committee. (H.M.S.O., 1958.) 15s.

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- JAPAN BETWEEN EAST AND WEST. By Hugh Borton and Others. (Harper, New York, 1958.) \$4.75. Presented by the publishers. (See review in this JOURNAL.)

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- THE FUTURE OF NUCLEAR POWERED SUBMARINES *United States Naval Institute Proceedings*, June, 1958.
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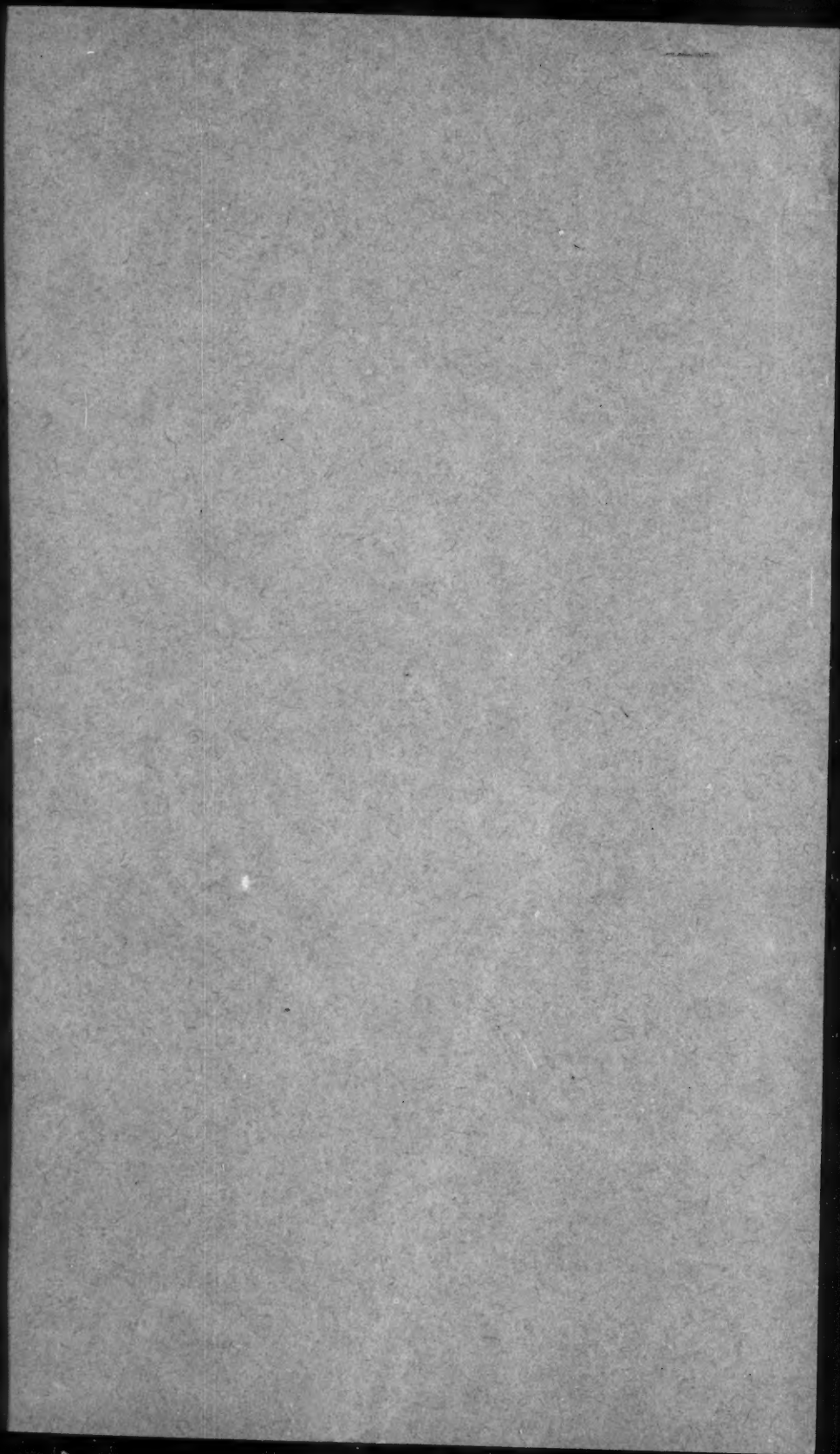
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- COMMITTED *Manchester Guardian*, 18th July, 1958.
- BALANCE SHEET OF INTERVENTION *The Economist*, 19th July, 1958.
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